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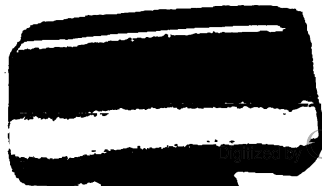
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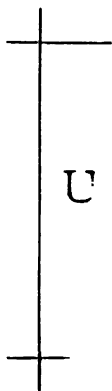
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THE PSYCHOLOGY OF EDUCATION



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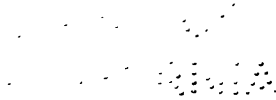
BY

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“The dearest friend to me, the kindest man,
The best-condition'd and unwearied spirit
In doing courtesies.”

PREFACE

THIS book is a systematic treatise neither on psychology nor on education. It endeavours to set forth the relation between them. This relation must be found in the actual lives of individual children, and it is to help people engaged in education to study those lives that I have written. I have endeavoured to keep as free as possible from technicalities, and throughout to deal with life as a developing whole. Though the treatment is psychological, the selection of topics has been determined by educational considerations. The end sought is a presentation of the general form in which efficiency of life develops through ever-extending purposes. The various human faculties are regarded as factors inter-mingled, in an indefinitely large variety of ways, in every piece of life, and are, therefore, not considered apart and in themselves. Similarly, little or nothing is said of elements of experience which are merely constituent of fuller forms of life.

That a much more extensive and exact knowledge of facts must be attained before the course of mental development can be set forth with scientific precision and completeness is certain. But for the purpose here in view this is not altogether a disadvantage. The main lines are, I believe, sound, and the reader is, by the very generality of the treatment, forced to recognize

that he cannot get all he wants by reading, but that a substantial part of the work is left for him to do. Moreover, if a detailed chart of life could be laid down the temptation to forget that it could be only an abstraction, and to consider it as a kind of biography of every child would be one which many would be unable to resist. Then the study of psychology would tend to make educative work unpsychological. For it is individual lives with which the educator has to deal, not generalized averages. Still, more detailed knowledge is wanted. But it is knowledge of concrete pieces of life, not of isolated facts torn from their vital context. If, to any degree, this book should inspire those who find it helpful to publish precise records of careful observations on points which especially interest them it will be of some service to the cause of psychology as well as to that of education.

J. W.

THE UNIVERSITY, LEEDS,
February, 1911.

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CHAPTER I

EDUCATION AND PSYCHOLOGY

A SCHOOLMASTER once caustically described psychology as "putting what everybody knows in language which nobody can understand." Although it cannot be granted that this somewhat cynical estimate is "the truth, the whole truth, and nothing but the truth" yet it must be confessed that it has a specious plausibility. For the whole subject-matter of psychology is our own inner experience, than which nothing can be more familiar, and it is as natural as it is mistaken to assume that the familiar is always understood. Yet, in truth, most people are so engrossed in living that they find no time to understand life.

The tyro in psychology, then, finding that the topics discussed are old acquaintances, is apt to think that there is nothing new except the names by which these old friends are called. Here he finds some familiar terms used in ways not so familiar and generally with a stringency to which he is unaccustomed, and some strange terms which seem to him only to express facts about which he has been accustomed to think and speak without their help. By each use he is more or less repelled.

This is, no doubt, an attitude not uncommonly taken by students who are required to read psychology as part

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of their training for the work of teaching. The very fact that they approach the subject, not as one of which their own experience has made them feel the need but simply as one required for a certain examination, tends to make them regard it as matter to be understood and remembered indeed, not to be practised. As well might one attempt to become a botanist from the study of books alone. The result is apt to show itself in a greater or less facility of writing and talking empty verbosity adorned with tags of psychological nomenclature. In a practical mind this breeds disgust. Doubtless, the culmination of such an experience was marked by the heartfelt exclamation of a student at the close of his course of training: "Thank heavens! I've done with psychology at last."

Of course there is an obvious retort. When such a person affirms in after life that he has never found the psychology he studied as a student of any use to him in his professional work, it would be both true and pertinent—if impolite—to reply "But you never *did* study psychology, and the fact that you speak of your study as in the past proves it." Yet, to point out that many have made a particular mistake does not prevent others from falling into the same error.

I by no means wish to imply, however, that all teachers who condemn psychology do so because they have never really approached it. Some of those, indeed, of whom we have just been speaking become good psychologists, despite themselves and without recognizing it. Often, no doubt, the term carries for them such unpleasant associations, as denoting an empty and soul-deadening verbalism, that they would repudiate with scorn and indignation the charge of being psychologists. Psycho-

logy to them still means analyses and tabulations of certain abstractions, and they seldom bridge the chasm which stretches between that pedantic erudition, as it is to them, and the living knowledge of the children they teach which has been attained by constant sympathetic intercourse. Yet this is the real psychology which alone is of worth to the practical educator.

Despite their outspoken attitude of contempt towards theoretical psychology, probably no teachers in the world take more personal interest in their pupils, and gain a more real and intimate knowledge of them, than do many in our own country. Boys and girls are to them not merely pupils, not simply pegs to be fitted with more or less violence into more or less wrongly shaped holes; they remain throughout and under all the school routine just boys and girls. And the aim of the master or mistress, like that of the parent, is first and foremost to make out of those boys and girls men and women who will live noble and useful lives in their various callings. To secure this all kinds of influences are brought to bear; and many an hour does the good teacher, like the good parent, spend in thinking how Tommy is going wrong, and how best to lead him back to the right way; how Jack is falling off in enthusiasm for sport or lessons, the reasons for this declension, and the course which in view of those reasons it will be wise to adopt: for what kind of occupation Harry is showing most aptitude. Such problems as these loom at least as large in the mind of every true educator as do those of instruction. Even in the latter the good teacher is always seeking fresh ways to evoke the desire for knowledge, to stimulate and encourage effort, to cultivate taste, to direct and strengthen purpose. These are all psycho-

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logical problems, for they all involve meditation on the nature of the child's experience, and on how the teacher, by regulating his own actions, can modify that experience.

In such ways experienced teachers often attain a very remarkable amount of pertinent psychological knowledge and insight, and are, indeed, among our best practical psychologists. They can teach the beginner much, even though they may never have heard such blessed words as psychosis and apperception, or have made experiments with chronoscopes, kinetoscopes, and ergographs. Nor can any beginner in teaching ever be so good a child-psychologist as are these veterans, even though he may have mastered all the text-books on the subject that have ever been written.

Yet these experts in child life are often the very people who assert most strongly that they find no help in the books. To advance against their position the argument that as psychology is the study of experience it must help those whose work it is to mould and direct experience is obviously beside the mark and has more than a suspicion of begging the question. For it assumes that the psychology which is helpful is the psychology which they reject. Really it is not so at all. The psychology which is useful to them they have studied—as only can it be truly studied—by direct, sympathetic and intimate observation of the young. True, they do not call it psychology, but it is psychology all the same, for it is an understanding of mental life.

When due weight is given to such considerations as these it will, I think, be evident that no one can educate without a real practical psychology, that is, a true knowledge of his pupils. Teachers and parents in so far as they lack this are nothing better than

external forces which define more or less narrowly the course of the child's life; they are not, and never can be, agents influencing that course of life from within so as to make it richer and fuller. Such practical psychology can be gained only through that real sympathy with the young which involves not only kindly feeling but power to understand, which is an insight into the child's desires, his plans, his thoughts—an insight which grows by successful practice till at times it becomes almost uncanny. Some people have such insight by natural gift, others have not; the majority have a little of it which can either be cherished or smothered. The first are the heaven-born teachers; and they are few. The second are people—also few, but by no means unknown—who never can become educators nor ever learn to teach well. These ought never to enter, or if they have unwittingly entered should leave as quickly as possible, the profession of schoolmaster, for no amount of training or experience can fit them to do their work with satisfaction to themselves or with profit to their pupils. For the great majority the primary duty is to cherish and foster that innate divine spark of sympathetic insight which alone will enable them to become "artists in the souls of children."

We seem, then, to have come to this: that the heaven-born teacher becomes a psychologist because he cannot help it; that the average teacher can only develop into the good teacher by becoming a psychologist; that the person who cannot by any means become a psychologist must always be lamentably out of place in school.

There is little doubt that the many practical psychologists among our teachers will grant freely the value here claimed for a knowledge and understanding of

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children's lives. They know that all their successful work is built up on such insight. Will they not follow us a step further and grant that from much specific knowledge of individuals they draw more or less wide-reaching generalizations? But these are of the nature of science. Psychology as a science must, like every other science, rest upon careful examination of facts, and consist of valid inductions from them. Really, each true educator has formed his own science of child-experience; he not only knows his own children but he has, more or less consciously, generalized from them. This is, however, a slow process to most, and one attended by many mistakes. In teaching and in influencing and guiding others the ordinary man or woman often goes wrong before learning to go right. Life must have brought home to all of us the truth which Roger Ascham long ago pointed out: "Learning teacheth more in one yeare than experience in twentie.... He hasardeth sore, that waxeth wise by experience.... We know by experience it selfe, that it is a marvelous paine, to finde oute but a short waie, by long wandering."¹

In the study of the young nothing can take the place of experience; but will not the individual experience accomplish its work more perfectly and more rapidly if it be guided and tested by the accumulated experiences of others? Even with such guidance every educator will make mistakes in dealing with the young. But the experienced man avoids, as it were by instinct, errors which cause the beginner much trouble at the time and much discouragement and weariness of heart. Could the beginner avail himself of the other's experience he might avoid many such pitfalls.

¹ *The Scholemaster.*

To give such guidance, then, should be the aim of theoretical educational psychology. It should consist of generalizations from an experience wider than that of any individual educator, but of the same kind as those which each real educator makes. The collation of these will separate the usual from the exceptional, and will trace the broad outline of normal development from childhood to manhood. But the exceptions also will demand careful study, for every abnormal case is an extreme development of something which, in a lesser degree, is found in the normal human being. The study of such a psychology cultivates a certain kind of outlook, gives some familiarity with broad and common features of mental life, indicates methods by which that life may be most fruitfully studied, lays down some general canons of interpreting the actions of others, enables us to test our results by comparison with those of other observers, and, perhaps more important than all, puts us on our guard against applying to the conduct of the young the maxims of adult life.

Such a psychology is only in the making. That in the ordinary theoretical treatises is of a very different character. It may, indeed, without serious exaggeration be said to be the psychology of the adult philosopher. The reading of such treatises leaves the impression that intellect is the all important factor in life, and that emotion and will are much less worthy of attention. Now, even the adult only occasionally guides his conduct by the light of pure reason ; the young child never. A psychology which implies that reason is the lord of conduct treats what is in most lives the exceptional as if it were the general rule. Most emphatically unreal is such a psychology when the life of the young is in

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question. Nothing more unlike a child can well be imagined than the smoothly working thinking-machine there set before us. No wonder that few educators find such books helpful, or that the ordinary cultivated man prefers to pursue his studies in human conduct in the company of such psychologists as George Meredith or Thomas Hardy who show the actual play of forces in real human lives.

Yet the influence of this intellectualistic adult psychology is everywhere to be seen in education, and is everywhere unfortunate. Certain psychological conceptions are current in every society. This, indeed, must be so, for men and women do know something of their own lives, and do talk about them. This involves the use of certain terms to which a general, if vague, meaning attaches. The implications are usually accepted with the terms, and in that way everybody is some sort of a psychologist. There is, so to say, a psychological element in the general intellectual atmosphere. The only escape from being obsessed by this vague current psychology is by strenuous and persistent thought to attain a truer conception of life, and one less liable to be full of those inconsistencies which are the ordinary marks of general notions unconsciously derived from current modes of speech.

Will anyone deny, when he thinks over the idea of education current in England, that it is dominated by a much too exclusively intellectualistic view of mental life? Is not education made synonymous with schooling, and schooling with instruction? When the numerous orators on public platforms talk of improving education, do they not nearly always mean the learning of some new subject or the study of an old one in a new way?

Do not many people imply by 'educational teaching' simply the training of various intellectual powers?

We must, indeed, go further. Not only does the vague current psychology of the day give a definite bias to practical education, but the hypotheses of professed psychologists show a great inherent vitality as maxims of education long after they have been decently buried by the psychologists themselves. May we say that this is a natural result of the general neglect of theoretical psychology by the very people who, as practical psychologists, could give to it that contact with aspects of real life which it is apt to lack?

We still hear people talk of training various 'faculties' by special kinds of mental work, as if these mysterious powers were independent organs which could be trained separately by exercise—as, for instance, the arm could be trained apart from the rest of the body—and, once trained, could be used to do any form of appropriate work. We are still told that "Jack remembers his lessons well because he has a good memory," though the professed psychologist would smile a kindly if rather superior smile, and point out that the supposed explanation simply states the explained fact in other words. Jack remembers well *what* he remembers well. True! But there is little ground here for making Jack learn a mass of things by heart in order that he may in future remember other things. "But," it will be urged, "the mind should surely be trained." Most certainly, and an educational psychology ought to take as its topic this—how the mind can best be trained. But then, mind is not equivalent to intellect, nor is the exercise of isolated powers the same thing as the training of the mind.

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The essential aim of most adult psychology has been analysis, and through analysis a clearer comprehension of the modes of mental action. Though this method has many advantages for its own end, it is most misleading when its abstract results are regarded as actual

- mental processes. Mental life is a whole, and as a whole
- education has to deal with it. It is a growing and developing whole, and education should promote that growth and direct that development. As we shall hope to show later the question to be asked of an educational instrument is not—Will it train the observation, the memory, the imagination, etc.? but—How will it enlarge and enrich the experience of children who have reached this particular stage of development, and so help on their advance to the next stage? To this the analysis of mental powers or faculties can give no answer.

If, indeed, the educative aim were to train these powers, and if the training could be given them in isolation, then there would be obvious advantages in studying them in the most perfect form accessible to us. The results of our investigations into our own powers would be checked by the testimony of those whose powers were greater. We should regard ourselves as imperfect in so far as we fell below the highest standard, and the children as more imperfect still. In a word, we should look upon them as very incomplete and even fragmentary men and women. Such an attitude towards them does indeed show itself continually in the treatment of even quite young children both by parents and by teachers. The little ones are assumed to act from adult motives, are asked why they did this or that, why they prefer this to that, and generally are regarded as somewhat badly made reasoning-machines. In so far as this

attitude is taken the child's natural growth receives no help. On the contrary there is cultivated in him a kind of pose—an assumption of feelings and motives which he never has.

This faculty-training hypothesis is evidently most operative in teaching. Some say that the great thing is to exercise the will, so that it does not matter what a boy learns so long as he dislikes doing it. Others advocate concentration in mathematics on the ground that it trains good reasoners. Some urge the study of natural science in order that the children may become proficient in observation and inference, others claim that learning Latin gives the most complete exercise to all the important intellectual faculties. In each case the belief is implicit that a power once acquired will be operative in every sphere of experience, and not simply in that in which it was trained. The results do not bear out this expectation. The impotence, moreover, of the theory as a guide to the choice of subjects to be taught was made very plain in the great struggle between classics and science to be the chief element in school work; for the advocates on each side for years based their arguments on exactly the same psychological assumptions of faculty training.

This old and discredited hypothesis is implicitly accepted by many teachers who are in other ways true educators. In matters of influence and discipline they are not obsessed by a futile psychology, and they act on the basis of the true psychology they have learnt from intercourse with their pupils. But in teaching they follow a tradition which rests on a psychology implicitly taken for granted, but which is a mischievously false guide. Hence, their teaching is often much weaker

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than their general educative influence. Hence, too, arises the separation of the work of the school from the real interests of life. For, if the school concerns itself only with the exercise of mental powers it naturally plans its curriculum with the consideration solely of the kind of exercise each subject can furnish, and is satisfied when it has provided for each of the arbitrary list of powers. The relation of those powers to the interests and requirements of the world around is branded as 'utilitarian' and dismissed as 'uneducational.'

There is, however, offered us a psychology which explicitly rejects the faculty hypothesis. This is associated with the honoured name of Herbart, and also dates from the days before the theory of evolution became a living force in men's minds. Most modern Herbartians reject their master's metaphysical assumptions, but the whole framework of their theory of education is based on his conception of life. There is no need to examine it here in detail, because as an essentially intellectualistic psychology of adult life it is open to the same fundamental objections we have already considered. The Herbartian theory of apperception does, undoubtedly, describe one aspect of the growth of experience. But it assumes that organs of knowledge already exist in the mind it is considering, and it maintains that these intellectual organs operate by their own inherent power. From their action both feeling and will are said to arise. This psychology is, therefore, even more emphatically intellectualistic than is the faculty psychology, for the latter did regard the will as an independent faculty.

Of course it follows from this conception of mental life that the Herbartian regards instruction as the one essential instrument of education. "Teach a boy to

understand morality and he will act morally" is quite a legitimate deduction from the doctrine that will grows out of the connexion of thoughts. Here, again, experience fails to uphold the theory; and psychological theory, like all other theory, is condemned if facts contradict it.

Once again, then, we are driven back to the child himself as the one and only source of our facts, the one and only birthplace of our theory. "Study the child, for it is certain you do not understand him" said Rousseau, and since his time something has been done. Yet it is evident that if this study be approached with a pre-conceived adult theory its results will be of little worth. Too often this has been the case. The observer has started with the categories of adult life obtained from such analyses as we have mentioned. One of two opposed errors results.

The one—to which we have already referred—is to read into the child-life an experience fuller and more definite than it can possibly have. For example, to assume that when a boy of ten does a cruel act he has the same ill-feeling which would lead an adult to act cruelly, or that when a child makes surreptitious use of his neighbour's work he is guilty of the same kind of deliberate fraud as an adult forger, is to assume that the young offender looks at his relations to others from the standpoint which only long years of intercourse have made possible to his adult judge.

There is, however, a more insidious, and at the present day a more fashionable, danger than this looking upon the child as a miniature adult. This is the assumption that the child's mind is different in kind and constitution from that of the adult. The higher faculties, such as

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reason, conscience, will, and the more refined sentiments, are denied him. His mind is thus regarded as an imperfect fragment of an adult mind, and the observer asks such questions as—When does such and such a power manifest itself? that is, taking the results of the analysis of adult consciousness—When does each of the classes thus obtained first appear in the child's history? Such an error vitiated the child psychology, and through it the general educational scheme, of Rousseau.

There is at the bottom of both these errors the same false assumption—that analysis of adult experience gives a classification of powers which are similarly differentiated from each other in the child. The one error assumes that they are innate; the other that they appear serially like the leaves and fruit on a tree, and the task of genetic psychology is then supposed to be to find in what order, and at about what age, they manifest themselves.

The results thus obtained are of little interest and of less value. The problem is approached in a wrong way—the question asked is in false terms. It is true that the child will become an adult, and that when he reaches maturity the categories of maturity will apply to him. But it is not true that his progress is from a mutilated and incomplete mind to one which possesses all its organs. At every stage of his development a child's experience is as full and satisfying to him as is that of a philosophical psychologist to himself. That is, he is always in full relation to his world, he puts forth all his powers, he is only prevented from accomplishing all his desires by obstacles similar to those which equally hinder the adult. The child feels no sense of incompleteness different in kind from that felt by any adult

who finds that there are limits to his knowledge and his power.

The essential difference between the experience of the youngest child and that of the philosopher is that the former is vague and undifferentiated both in its outer reference to the world around and in its inner mode of affecting him. The philosopher thinks, that is, he subsumes his experiences under certain abstract ideas which both individualize and connect its elements; the young child feels, that is, he is vaguely aware of himself and his surroundings, but at first neither separates nor relates them. Progress from the one stage to the other is a gradual and continuous awareness of complexity—of at once separating elements of experience and connecting them in definite relations with each other. On this road individuals advance at different rates and to various points. The real problem of genetic psychology is to enquire how such development is brought about. In other words it is a causal enquiry, the object of which is to discover what kind of influences lead most suitably from any one stage to that which naturally grows out of it. It is true that when a new step is clearly made it is often possible to classify it under one of the categories of adult life. But even so the name really denotes modes of experience of very different value and function in the child and in the adult. The vital problems are—How did it gradually grow out of past experience and to what will it develop in future experience?

Nor must it be forgotten that not only do adults differ in the total amount of advance in mental life but that each one of us at any one time would find himself at many different stages of advancement, if the point were decided by abstract conceptions of such typical activities

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as understanding, reasoning, and so on. Are there not some books and arguments which we can understand perfectly; that is, their constituent parts stand clear before us and we appreciate fully their relations? And are there not others before which we find ourselves in a mental fog which all our efforts fail to dispel? "We cannot follow the argument" we say, and this means that we cannot grasp the force of the distinctions made, nor their relations to each other and to the whole discussion.

If in such a case we wish to understand we have a feeling of unrest, but often we do not care whether we understand or no, and at times we think we understand when we really do not, because, perchance, some of the elements are clear to us, or because the whole is familiar, at any rate in name. To all these forms of adult consciousness the child presents us with parallels. The things which arouse the various states are different with him and with us, but that does not affect the mental character of the experience. Sometimes, even as to the object the experiences are very similar. For example, if an adult whose knowledge of French is small is travelling in France he understands but little that is said—a word here and there stands out as familiar. His power of expressing his wants is equally imperfect. His knowledge of French increases as, little by little, words and phrases stand out more distinctly, and as their combination and their reference to reality becomes clearer. This means a growth not merely in knowledge but in power of action and of enjoyment so far as these depend on intercourse with French people. But no new power has been born in him, nor has the number of French sounds which fall on his ear of necessity been increased. It is simply that his experience in this respect has resolved

itself more and more into distinct elements, and that these more and more hold together in relations which have a meaning and, therefore, a value for him, in that they make clear experiences which before were confused. Of the same general order and character is the child's acquirement of his mother-tongue. Further, the process is typical of all mental advance. For it shows us how experience is enriched by the separation and relation of elements, how this increases at once knowledge and power, and how the whole of the mental life is everywhere in play in every step of the advance.

The study of children must, then, be approached with an open mind, freed from all preconceptions of adult psychology. But an open mind need not be an empty mind. It is no qualification for a would-be observer of children to be unprepared by any kind of pertinent knowledge. Now, the study of the inner life of another, whether adult or child, is indirect. What is directly given to the observer is conduct. Outwardly life expresses itself in action and in speech, which is itself a kind of action. The psychological observer tries to get at the meaning of these outward manifestations. Only so can he influence conduct by modifying motives, by evoking purposes, and by all the other means which are summed up in the word education.

Now, the passage from outward conduct to inner meaning can only be mediated by a middle term which includes them both. That middle term each one of us can find only in himself. For each has a direct and immediate experience both of his own inner life and of the outward expression of that life. In that experience inner and outer are conjoined. But their relation is made explicit only when it is deliberately investigated.

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B

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One who has never been accustomed to ask why he acts in such and such ways is generally astonished, when he does make the enquiry, at the difficulty he finds in giving full and satisfactory answers. As that admirable philosopher, the late Master of Balliol eloquently tells us: "There is a strange mixture of the conscious and the unconscious in our mental history. Our life is not unconscious like the plants'; we see clearly what we are doing from day to day. We are aware always of the immediate interest that is occupying us, the immediate object we have in view. But we are seldom aware of the general current and tendency which these particular acts are contributing to form within us. Each act, taken by itself, does not seem of much importance. We seem continually to be dealing with small details, and rarely, if at all, with great and momentous issues.... The little exigencies of every day—whether we shall go to see a particular friend, or read a particular book, or devote particular time to this object or to that—it seems often indifferent whether we decide them in one way or the other; and often it is indifferent. But we are apt to forget that life masks its great issues under the appearance of a series of unimportant circumstances and events, in each of which, however, there is some opportunity for the exercise of courage or cowardice, truthfulness or untruthfulness, magnanimity or meanness, justice or injustice, charity or uncharitableness, love or hate. Steadily, silently, the inevitable process of change goes on, and neither the individual himself, nor any of those nearest to him may notice how, in the one case, his character is being strengthened and elevated, and, in the other case, is being weakened and lowered. And then, if a great issue does come, and he is put to a decisive

trial, neither his friends nor he are able to comprehend how it is that, in the one case, he rises to the occasion and shows a strength and resource for which beforehand no one would have given him credit; or, in the other case, betrays a weakness and poverty of character, which no one, and he himself least of all, had suspected.”¹

The first step, then, on the road to becoming a psychologist is to obey the old adage “Know thyself.” Truly, this is of little practical use in life unless it be conjoined with the yet more important command “Govern thyself.” To know oneself weak in any point and yet to lack the self-control to adopt the means which will strengthen the weak place is evidently futile. Self-command, as well as self-knowledge, is required of one who would train others, for much of his training must work through example. Granting this, however, let us ask what is the kind of psychological knowledge that will be of most direct value in the study of children.

Probably it will be agreed that the essential psychological questions are—How did such and such an experience originate, and from what did it grow? What value has it in the present? What is likely to be its influence in the future? The adult must recognize that his experiences are not those of the child, but at the same time he knows that there has been no breach of continuity in his life since he was a baby. This means that his experiences have evolved from each other in an unbroken stream. Some had a very transitory effect, others have been much more enduring; some have proved fruitful of good, others of evil; some have affected his life in one way, others in different ways.

Just as far as a man really understands this stream of

¹ Edward Caird : *Lay Sermons and Addresses*.

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life which he calls himself, will he approach intelligently the study of another stream of life of the same nature but of different composition and at a different part of its course. He knows that when his experience is of a particular kind his conduct shows certain characteristic features, and as the former changes the latter is modified. He knows, for example, that certain modes of experience rouse his anger, and that anger always prompts him to various expressive acts, though he may at times restrain them. When he sees similar acts he infers anger in another and he looks for its origin in experiences broadly analogous to his own. When he is interested in a pursuit he gives time and energy to it. So when he sees a boy throwing himself energetically into some activity he assumes the presence of an interest; and, conversely he assumes the absence of interest when these outward signs are wanting. Such interpretations are, of course, only the first step. The really important enquiries as to the origin and the influence of the experience follow.

Sometimes we are told that a true educator "puts himself in the place" of his pupils, "becomes a child among children." This is surely a very foolish and perverse reading of psychology, though doubtless inspired by the best of motives. If what has been said is true it is evident that no adult *can* become a child among children or take a child's point of view. His wider and more developed experience absolutely makes it impossible. One can no more hark back to the mental than to the physical life of a child. And if one could one would, of course, in doing so, divest oneself of one's character and office of educator. For a child does not *educate* his fellows though he may influence them. Education implies training, and that involves the action

of the mature mind upon the immature. What is required is that the educator can appreciate the outlook of the child, can understand it and sympathize with it, but that, at the same time his own wider outlook shall enable him to use this childish experience as a stage in the continuous progress towards manhood, so that it may be neither wasted nor turned in a wrong direction. The educator must know both himself and his charges if he is to do the best educative work. That is the psychological knowledge which he needs; without it, indeed, he is helpless.

This leads to the consideration of a further important point. When one simply asks what is in one's own mind, and tries to analyse it, one is shut up, as it were, in oneself. Here we meet another reason why the traditional theoretical psychology has been of so little service to education. Till quite recently it has been essentially individualistic. From an individualistic psychology, indeed, the eighteenth century evolved a thoroughly individualistic theory of life and conduct, with 'Liberty' as its watchword. The educational deduction was made by Rousseau, who aimed at producing a man independent of his fellows. The same theory still survives, though often strangely mixed with views of social relations which are quite inconsistent with it.

When, however, one seeks to discover the origin, the growth, and the effect, of one's experiences, one is led at once to constant and continual relations with the surrounding world of men and things. One finds that experiences of similar general character differ according as they are solitary or social; that, for instance, the pursuit of any purpose is fuller, stronger, more conscious,

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and less likely to be checked by doubts when it is undertaken in conjunction with a party or society organized for that end than when it is pursued alone. Thus we learn to look upon our experience as a relation between ourselves and our surroundings, and to realize the enormous influence the life around us has upon our thoughts, feelings, desires, and actions. So we are led to adopt a true attitude for the direction of the lives of others. For though education is in a sense a personal training, yet most of that training is given through groups and classes. Such groups may be a great help or a great hindrance to the personal influence of the schoolmaster. If he is wise they are the former; just as, broadly, with wise parents a large family is a better educative organ than is a small one. But wisdom in this case means insight into the relations of individuals to groups—in a word, a grasp of social or collective psychology. This, again, is quite a new branch of investigation, and the study of its special reference to education has hardly been begun.

Our argument has aimed at establishing that the work of education is always in fact based on psychology, though often implicitly; that much of this psychology is unsuited for the purpose in that it is too intellectualistic, too individualistic, and gathered from analysis of the adult mind; that the psychology which is needed is genetic, in that it traces the gradual evolution and enrichment of experience, and social, in that it considers the common life of groups and the relations between groups and individuals as well as the lives of individuals; that such a psychology is only in the making, but that many experienced educators have a great deal of this kind of knowledge which guides them in their work and is a

main reason of their success. Could these empirical and scattered pieces of knowledge be collected and collated a sure and long step would be taken in the formation of a body of theoretical educational psychology which would furnish a safe and pertinent propaedeutic to the actual study of children, and would regulate and enlighten that study itself.

Pestalozzi's desire "to psychologize education" is still far from being accomplished. But let us be quite clear as to what this should mean. It implies that the natural mental history of the child is known so that he may never be called upon to do anything which would hinder his growth and starve his experience, or any other thing which would be possible to him only if he had advanced to a further point than he has actually attained. It involves, too, that the educator secures that the child has all the kinds of experience necessary for his growth, and has them in the most fruitful way. But with more than this psychology cannot deal. It is, therefore, a grave error to speak of education as merely 'applied psychology.' Such exaggerated claims do not dispose those who are already prejudiced against everything which is called psychology to think more favourably of its advocates.

A merely psychological education is really a contradiction in terms, for it would leave the child to develop freely as a wild animal. Psychology can say nothing as to what is good and what is bad. For it, as a natural science, facts exist, but they are in no wise valued. Psychology has no moral preferences. Its scientific interest is as much excited by monstrous moral depravity as by saintly holiness. For it they are equally forms of experience. Not psychology but ethics condemns the

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one and approves the other. Psychology, therefore, can say nothing as to the ultimate question of education—that of end to be sought.

Such considerations show us the futility of defining education in psychological terms, as, for instance, "the harmonious development of all the powers of the child." In the first place, 'harmonious' is a vague and ambiguous term, and, consequently, it presents no definite aim; and, in the second place, 'development' is devoid of any real meaning. For a power may be developed in a variety of ways, and many of these we condemn as immoral. We do not, for example, wish to develop a child's intellectual powers so that he becomes a skilful forger or a promoter of bubble companies, nor his power of self-assertion till it appears in bullying and tyranny, and, perhaps, finds its fruition in murder; nor his power of emotion so that he grows up a sentimentalist or a man dominated by his passions. It may be objected that none of these cases would show a 'harmonious' development; but this is not obvious. The murderer may plan his crime astutely and may be urged towards it by feelings and emotions which are well under control. The sensualist may have persuaded himself that in sensuality is to be found the greatest pleasure, and that to get as much pleasure as possible is the real aim of life; to that he may skilfully address both his will and his intellect. If, then, such development be condemned as wanting in harmony, it is because under that term there is tacitly, and perhaps unconsciously, introduced the idea of harmony with established standards; that is, of harmony with something outside and independent of the individual life. This is obviously a very different thing from harmony among the several elements of that life.

'Harmonious development' may also be interpreted—and often is interpreted—to refer to a kind of typical 'well-balanced' or 'well-proportioned' mind, in which no power stands out prominently. That a large number of such minds are desirable in the interests of social stability may be granted. But it may also be urged that nature is never likely to fail in the production of mediocrities. Such minds, however, do little for human progress. "A plain man is very much like a plain cook, unable to cope successfully with anything beyond the commonplace."¹ All the great achievements of mankind have been due to men whose minds were in this sense ill-proportioned. "Genius is akin to insanity" expresses just this fact that some one power or set of powers dominates the life, and is not tied down by other powers. Of course there is a limit beyond which this one-sided ruling of the life is good neither for the individual nor for the community. But it by no means follows that an educator is justified in attempting to stunt the growth of some special power for fear it should run to excess. It is not the task of education to deprive the world of its geniuses, its heroes, and its saints. "A well-proportioned mind is one which shows no particular bias; one of which we may safely say that it will never cause its owner to be confined as a madman, tortured as a heretic, or crucified as a blasphemer. Also, on the other hand, that it will never cause him to be applauded as a prophet, revered as a priest, or exalted as a king. Its usual blessings are happiness and mediocrity. It produces the poetry of Rogers, the paintings of West, the statecraft of North, the spiritual guidance of Sumner; enabling its possessors to find their way to wealth, to

¹ W. J. Locke : *Idols*, ch. 24.

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wind up well, to step with dignity off the stage, to die comfortably in their beds, and to get the decent monument which, in many cases, they deserve. It never would have allowed Yeobright to do such a ridiculous thing as throw up his business to benefit his fellow-creatures.”¹

As psychology cannot decide the end of education it is, of course, unable to evaluate the means. It may show us that a child is actually interested in this or that, or make it probable that in such and such a way his interest will be aroused. But as to whether it is well that he should be so interested psychology is dumb. For guidance as to the kinds of experiences he should try to induce in his pupils the educator must seek elsewhere. To look to psychology leads directly back to the training of individual faculties.

Nor can psychology dictate the method of teaching, that is, of leading a child into an experience. It is, indeed, fashionable to say that teaching method should not be logical but psychological. This is pure muddle-headedness. Every process of thought is a fact in mental life, and is, therefore, a fact for psychology. If the reasoning be bad the fact may, indeed, be psychologically more interesting than if it be good; for then both the passage of thought by which the conclusion is reached and the origin of the error have to be investigated, and the psychological problem is so far a richer one. But the intellectual aim of teaching is to train in correct thought and in the legitimate use of evidence. This, of course, is logical. ‘Logical’ does not denote one kind of thought-process and ‘psychological’ another and opposed process. All thought is ‘psychological’; the

¹ Thomas Hardy : *The Return of the Native*, Bk. iii. ch. 2.

aim of teaching is to give it the further quality of 'logical.' Psychology, therefore, can neither lay down methods nor test their results. All it can do is to help the teacher to decide what *kind* of logical thought he may expect pupils of a certain age and advancement to be capable of experiencing.

Method in teaching, then, must be in harmony with the forms of mental activity appropriate to the particular pupils, but it must also be an orderly process towards a pre-determined end; an end which must be felt to be of worth by the pupils, or there will be no real process on their part. Hence, the teacher cannot teach effectively unless he can set before himself the pupils' process of thought in each piece of learning. Here is the great difference in attitude of pupils and teacher towards any lesson or set of lessons—the pupils think the matter under consideration, the teacher thinks the pupils' process of thought in thinking that matter. This thinking of the teacher is both psychological and logical. It is psychological, in that he has to grasp *how* the pupils think; it is logical, in that his aim is so to direct the pupils' activity that, out of the many ways in which they *could* think the object, they *do* think it in one which will lead to systematized experience. In brief, the teacher has to plan how to incite his pupils to a logical train of thought, and this obviously demands that the teacher knows both the character of such a train and the possibilities of his pupils in that respect. But it further implies that he knows what mental processes in himself will excite the desired process in his pupils. This also is psychological knowledge, for it is insight into the relation of mind to mind. The teacher, then, first thinks the steps to be taken by the pupils and then he so adjusts

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the external means of teaching, of which the chief is himself, that the pupils actually take such steps. He applies his psychology and his logic both in preparing his lessons and in giving them.

Education, then, should use psychology but not be limited by it, for the very purpose of education is to interfere with natural development so as to secure a richer experience and a fuller exercise of the higher powers. Such interference should be guided by psychological knowledge, or it is likely to stunt growth instead of promoting it. But to make education mainly a looking on while the child follows his spontaneous impulses is to condemn him to reach but a low stage of development. The child's spontaneity is the beginning of activities which it is the function of education to make more definite and more persevering than they would be if left undirected and uncontrolled. The difference between a cultured man and one of the same time and country who is uncultured is due to differences in the amount and kind of directive influences which have been brought to bear. Psychology is quite unable to explain it.

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CHAPTER II

STUDY OF MENTAL LIFE

It is not in giving rules or directions for specific educative processes that psychology has its value for the teacher. The book which sandwiches educational platitudes between mental analyses, and describes the result as specially adapted for teachers is, indeed, still with us, and is responsible for not a little of that hostile attitude of the practical teacher towards psychology which we have lamented. For these commonplaces of the school-room really owe their being about as much—and as little—to the psychological analyses as, when they appeared in the *Didactica Magna* of Comenius, they did to the wonderful analogies, such as hatching an egg, with which that writer connected them. If psychology can give the educator no more than this he cannot be blamed for pursuing more profitable studies.

But if, as I have argued, every true educator is always making use of real psychology then the value of a theoretical study of that subject is apparent. It will guide the beginner and be a help to the experienced. Of course the study of books is not enough. "Books, are only the gloss of life, they are not the text. Its secrets must be read in the living world, with much pain, and sleeplessness and wearied eyes."¹ Reading and

¹ W. J. Locke : *At the Gate of Samaria*, ch. 9.

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reflexion will no more make a psychologist than a physician or an engineer. But as these are welcomed as preliminaries and auxiliaries in the latter cases so they will be, when rightly conceived, in the former. It is true that a complete genetic psychology cannot yet be produced, but neither can a complete treatise on medicine or on engineering. In every department of human knowledge and practice advance is possible and is desired. But such advance must start from the standpoint already reached. As the would-be physician learns what he can from books as well as from hospital practice, so should the would-be educator. In the one case as in the other a few will make discoveries and push forward the boundaries of knowledge. The many, who are not the original minds, will apply the knowledge gained in their daily practice, and will at least try to keep abreast of the advances made by others.

It is true, as we have claimed, that many experienced teachers attain much psychological knowledge without any study of books. But are there not yet more whose life-long experience in school has never given them a glimpse into the real lives of those whom they are claiming to educate; who remain to the end what they were at the beginning, external forces striving to form the young life, and succeeding only in deforming it?

In reading a book on psychology it is absolutely necessary that the reader test every one of its discussions by examination of his own consciousness. It is further advisable, not only for the sake of checking the results of his own introspection, but also as a first step in observation of the lives of others, that he should compare his results with those of other workers. A

small group of fellow-students working in this way makes surer and quicker advance than would be possible to their isolated efforts. From such work they should amongst other things have made clear to themselves what is the true force of such words as 'interest,' 'attention,' 'memory,' 'desire,' 'purpose'—terms continually used in educational writings and discussions, and too often employed confusedly and ambiguously. They should also have discovered the general conditions under which such aspects of mental life show themselves, and in what way they affect one's relation to the things around one.

When the educator wants to use the psychological knowledge obtained by self-examination and reading to give insight into the mental life of a child, he is obviously dealing with a life which, in many essentials, is different from his own. A further step in his preparation, therefore, is to recall as clearly and precisely as possible remembrances of his childhood and youth, and to see how they are related to what he has discovered of his adult experiences and how the latter have gradually evolved from them.

This also gives a clue which will help him when he tries to foresee the results of certain of his efforts, though such prediction is peculiarly liable to error. A subject of study which attracts one boy may repel another, an exertion of influence which in one case is thankfully received may in another case be resented. General psychology, even when enlightened by intimate knowledge of his own life, can do little more than make him aware of these divergent possibilities. No doubt, in dealing with groups and classes the average result can be more frequently anticipated, for the opposed effects may be discounted or may even counterbalance each

other. But even here we can look but a little way ahead. For this takes us into the nearly untrodden realm of social psychology. There the problems are evidently of the utmost difficulty and complexity. "I need not say," remarks Leslie Stephen, "how shortsighted are the ablest statesmen, and how constantly that which happens is precisely the one thing which nobody foresaw, but which, after the event, appears to have been just what every one should have foreseen.... Will the increase of knowledge make men content or discontented? Will it confirm or shake the beliefs upon which the social order depends? Will it simply strengthen the impulse towards a higher culture, or will it also increase the tendency to self-indulgence and weaken the bonds of discipline? If we can give some vague answer to such questions it is clearly not such an answer as can be called scientific, or as enables us to give any definite prediction of results."¹

Every beginner in psychology, then, must start with an examination of his own conscious experience. This involves analysis, but the object of the analysis is to trace back each form of complex experience so as to discover which are the simpler elements; that is, which show most distinctly in earlier forms of the process. For the educator the main interest is in the *course* of mental life. Nor need analysis be pushed into the minute detail which is so valuable and necessary for the pure psychologist. By such tracing backwards of his own life the future educator will best fit himself to observe and understand the reverse process in the lives of his charges.

What would each one of us name as the essentially human element in human life? What raises man in kind above the lower animals? Certainly not the powers

¹ *The Science of Ethics*, pp. 18-19.

of sight or smell or hearing or physical strength or endurance. In all of these he is easily surpassed by eagle, by dog, by deer, by elephant, by camel, and by many other animals. Surely it is in the guiding of conduct by intelligence and will. If we examine this we find it means that we are able to set up before ourselves in imagination a more or less distant end towards which we feel emotionally drawn—that is, we have a sense of its value for us—so that we are not content to rest as we are without making effort to attain it; and that we have, as a result of past experience, such a knowledge of the mode of action pertinent to the case, and of the possibilities of pursuing such a course, having regard to the actions of others, the nature of the physical conditions, and our own powers, that we can plan the means to reach our end and fulfil our purpose.

Into the actual attainment there enter other factors. Many a course of action thus planned fails because of want of perseverance and staying power; or because of inability or unwillingness to bear discomfort, to overcome opposition, or to surmount difficulties due to the stubbornness of the physical things we have to use or to our own want of skill in managing them.

This last named characteristic of our actions—skill—raises a further analytic question as to its nature and origin. Let each reader take any acquired aptitude—*e.g.* power to play the piano, to write, to skate, to dance, to ride a bicycle—which he can plainly remember learning. Let him recall the process as clearly as he can. He will find that at first his whole will was fixed and his whole attention concentrated on the various details of the required movements, and that even so they were not successfully made. But this means that

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movements other than those desired were made instead. In other words, though the main idea of purpose was plain, the intellectual organization of means was imperfect, and the physical co-ordination of movements was more imperfect still. Now, when this is compared with the carrying out of the process after skill is acquired it becomes apparent that all this detail which took up so much attention has become automatic, or nearly so. The skilled pianist reads the notes, and his fingers strike the keys without any definite attention being given to their movements; indeed, such attention will be found to disorganize them. The bicyclist steers his course with his eye on the road, and avoids obstacles and turns corners without thinking of the complex and co-ordinated movements of legs, arms, and body which cause the machine to obey his will.

Having carried our minds backwards step by step from the present to the very beginning of a special acquirement, by reversing the process we set before ourselves a picture of the mode by which every child has to learn to do such things, and we see that it is only by carrying out such an analysis in each case as far as we can that we are in a position to observe intelligently the early stages in the acquirement by the child. Certainly much has been done in observation of the very earliest years of childhood, and of the facts recorded we can avail ourselves; but we should always interpret them by what introspective memory reveals to us of our own beginnings. And always we should keep to the only safe rule that whenever the assumption of a more elementary mental process is sufficient to explain the observed facts we are not justified in assuming a more complex process, even though that might be the true explanation in our own adult life.

Though, however, we may claim that rational regulation of life is the essential human characteristic, yet not much study of our own life is required to show us that this quality is by no means always apparent. We have already seen that even when we are following a course laid down by reason the executive processes have become mechanical. I wish to refer to a book on the shelves: I get up, walk across the room and fetch it, my thoughts fixed all the time on the point on which I am about to consult it, not at all on the bodily movements I make. This is obvious, but educationally it rather needs insisting on, because the reaction against unintelligent learning has shown signs of undervaluing the automatic element which is so important in all the executive activities of life. One cannot easily express one's thoughts in writing, for example, unless one can form the words automatically, and this involves both writing and spelling; one cannot develop mathematical relations if one has to attend to the simple arithmetical processes. Often a child is hindered in progress because he has not made the spelling of ordinary words, or the multiplication tables, automatic. So far from executive automatism being opposed to intelligent regulation of life it is its indispensable condition.

Only self-examination, however, will bring home to any one how large a part of his life has become a routine business into which intellect enters at the most to determine subordinate steps. The end is fixed, and so are the general means. A teacher goes almost automatically to school and passes through the arranged routine without continually deliberating whether to do the one or the other. Obviously, this too is good; for it leaves free all his powers to do well the actual work in hand. The

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end was decided when he determined to become a teacher, the routine when he drew out the time-table. If he is wise he gave much earnest consideration to both these points.

The intellectual regulation of life, therefore, is seen not to mean the continual deciding on each particular action. That would, indeed, be an ineffective life, partly because it would accomplish so little as each step would be delayed, and partly because what it did accomplish would not be related as a systematized set of efforts. It means the deciding of purposes—some wide as life, others subordinate though related to these most embracing ones ; the devising of means ; the carrying out of those means as efficiently as possible. And when the maximum of such efficiency is reached all that is mechanical is left to an acquired automatism. The function of intellect is to make use of its tools, not to be continually forging them.

It is quite possible, then, for an adult life to be as a whole rationally directed ; but such possibility necessitates that the dominant purpose, or harmonious purposes, of life have been cordially accepted, and that there is sufficient strength to keep broadly and generally to their pursuit. Can it be affirmed that this is descriptive even of the majority of adults? Have many persons the wide and comprehensive outlook on life which is implied? Have many sufficient strength of purpose to keep for long to the path they have traced out for themselves? Each reader must apply such enquiries to himself, and if he would make any advance in psychology he must answer them honestly. He may find that he has such purposes, but that they are 'castles in Spain,' and that his actual life is determined by much more immediate considerations. Or he may find that he has lived on from

childhood without ever having given serious thought to what his life as a whole is to mean, content to do the task and to seize the pleasure immediately to hand.

Whatever he may now be able to say of himself, according to our plan he must carry his thoughts back into the past. Starting from the present, after he has distinguished his purposes let him go on to enquire when and how those purposes began to take form, whence they were derived, what vicissitudes in influencing his life they have undergone. Has one of them grown up with his growth unnoticed, and perhaps unsuspected, till now this introspection has brought it to light as one of the dominant factors in his life? If so, can he trace it back to the influences exerted on him by parents, relatives, and friends? Did another spring up, as it were full-grown and armed, as the result of an inspiration received at some specific time from book or lesson or suggestion? Not that he is to expect to find the same purposes, originating in the same way, in those whose lives he will try to understand, but that he may appreciate the various possibilities of the genesis of life's influences.

This enquiry will surely bring to light the fact that, however wide and comprehensive his present purposes may be, they were not always thus. They have been gradually evolved, and, doubtless, he can go back in memory to a time when he had no purposes which were not bounded by the immediate future. Much earnest thought and careful separation of actual remembrance from flattering imagination is necessary before any adult succeeds in laying before himself anything like an accurate map, even in outline, of the purposes of his life up to the present, tracing them back like rivers to their sources, showing how, when, and why, they united,

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became larger, stronger, and more absorbing, till they have reached the present point, which itself is not the end of their course.

In such an examination of one's past life one becomes aware that at no time has there been a thorough-going co-ordination and combination of purposes. Many have referred to the present or to the very immediate future and have, indeed, scarcely been consciously adopted at all. The apprehension of the result and of the means is sufficient by itself to evoke the action, provided there be a sufficient spring of emotion behind it. Such actions we call impulsive, and most people do many impulsive actions to the end of their lives. Well that it is so. For when such deeds spring from warm and kindly affections they have a geniality which is apt to evaporate during a protracted process of intellectual deliberation. Moreover, immediacy is often essential to the beneficent effect of the act.

The motive power, then, in an impulsive act is an emotion raised by some immediate perception, together with an equally immediate apprehension of the action which will meet the situation. For example, I see a child in danger of being run over in the street; impulsively I rush forward to drag him back to safety. But impulses do not always tend to deeds with happy results. I am angered and I impulsively strike a blow of which the effect may be the serious injury, or even the death, of the offender. In such a case the impulsive act is probably felt at once to be in opposition to a much wider life-purpose, and there follows remorse. In the future I am likely to abstain from blows when roused to sudden anger. As we should say, I have learned my lesson. Of course, each reader must analyse a number

of impulsive experiences of his own, and note carefully the various modes in which many of them are checked.

What, then, do we find has happened in our own lives? Surely this, that as life goes on there is a continually increasing regulation of impulses. We still feel the emotion, we still see the direct means to express it, but often we inhibit that expression in outward act. We shall do well to give some time to studying the part played by this process of inhibition in our lives, for inhibition is nothing but self-control. Such an investigation soon brings out that inhibition is itself an activity; that is, it is a putting forth of energy. We inhibit the hasty blow in anger. How is this marked? Is it not by clenched fists, tightly locked jaws, and a general tension of muscles similar to what we find when we are resisting a physical force? If we ask ourselves *why* this effort is made we find the answer to be—because there is dominant in our minds an idea contrary to the impulse and stronger than it. It may be a feeling of former, or even present, affection towards the person who has roused our anger, in which case one impulse meets and conquers another: both are on the same plane. Such inhibition, however, could never be more than occasional and uncertain. The more important cases are those in which the opposed idea is of a wider and deeper character—that is, touches more of life—than the impulse. Such may be an idea of duty, or of prudence, or of regard for personal dignity.

If we then ask ourselves whence came these wider ideas we shall discover that we owe them mainly to the teaching and guidance of others. They were at first imposed on us, but we have accepted them, passively perhaps; at any rate we have allowed them to influence

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- us. In other words, the regulation of impulse is mainly
- due to education. Those who have been allowed to follow their own 'spontaneity' from infancy remain the creatures of impulse throughout life, unless, indeed, they are those exceptional natures in which there is an unusually strong personality which works out its own salvation.

Our investigation into our own experience will, however, bring to light yet a third ruler of conduct, which we all know as instinct. Often, indeed, we use the adjective 'instinctive' to characterize many of those automatic executive activities of which mention has been made, or to denote impulsive actions. We say, for example, that we instinctively turned to the left when riding a bicycle, or that we instinctively rushed forward to drag a child from danger in the street. So too acts are at times spoken of as instinctive which are mere physical reflexes, such as winking the eyes at the near approach of any object. In all such cases 'instinctive' is used as synonymous with 'immediate,' and simply implies the absence of deliberation.

There is, however, a more exact use of the term to which we shall do well to confine ourselves—a usage which limits instincts to specific tendencies which are part of the original nature of all men. They are born in us in the sense that they do not owe their origin to our experience, but certainly not in the sense that they are in full operation at birth. In such endowment man at first sight shows inferior to the lower animals. Their instincts guide their conduct very soon and very completely. This is not, however, because man is inferior to them in instinct, but because he is superior in reason. The richness of his instinctive endowment is well

brought out by Wundt: "Suppose a bird were to become interested in zoological investigation; he might well regard mankind as the richest of all creatures in instincts. Man shares with the birds the instinct to live in wedlock; like the fox, he educates his children; he has the beaver's impulse to build houses, and the bee's custom of founding states and sending forth colonies; while he has in common with the ant a pleasure in war, in slave-making, and in the domesticating of useful animals."¹

Man's instincts, however, develop slowly and in connexion with his powers of thought and understanding, so that they can be held in subjection, modified, and utilized. Instincts are thus the servants of man while they are the masters of the lower animals. In examining our experience we continually find an instinctive basis, which we detect by the impossibility, so to say, of imagining any other kind of response to the situation. At the same time we find that this instinctive basis is continually adapted so as to fit in with our designs and purposes. The simpler and more immediately organic instincts, such as hunger, we find operative in every part of our experience, and we recognize that we can control even an instinct so fundamental to the preservation of life by a regard for the rights of property. That is, instinct, like impulse, can be subordinated to wide regulative ideas. Another fundamental instinct—that of sex—develops at such a time of life that adults can recall with considerable accuracy its beginnings and development, as well as examine the mental states and tendencies to which it gives rise—the way in which it influences thoughts and imagination and prompts to

¹ *Lectures on Human and Animal Psychology*, Eng. trans. pp. 396-397.

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action for its satisfaction. Here again introspection shows the possibility of checking the action, and even of diverting the thoughts and imaginings, and may also bring home the difficulty of doing so—a difficulty undoubtedly felt more by some natures than by others.

Further, examination of such instincts will lay bare how strong a part emotion plays in an instinct, and how in instinctive action it is not our reason but a felt organic need which dictates the end. We may use intelligence in planning means for the gratification of the instinct if such means are not immediately available. Or we may deny it satisfaction, when our whole strength has to be exerted to turn the energy of life into another channel.

In an endeavour to discover which of our emotional tendencies are instinctive we cannot be sure of absolute success. Still, the quest is its own reward, for in that way alone shall we reach an understanding of the causes of special emotions, and of their relations to each other. Those which we find composite—as, for example, revenge, which involves both anger and desire for retaliation, if not also hatred—are, of course, not instinctive. Our aim is to reach those elements which will not yield to further analysis. Every step in our enquiry, when tested by our own remembered experience, shows us that many emotions are only possible to adult life, others to adolescence, others again to late boyhood and girlhood. Only the simplest and most direct are possible to early childhood. If those we reach in our analysis are not all absolutely instinctive, yet they are, at any rate, likely to be of so simple a nature that they may be expected to show themselves in the lives of even the youngest children who attend school.

So far we have tried to trace backwards in retrospection the springs of our conduct and the way in which it is regulated, and we have made clear to ourselves that the further we go back the less share reason and intelligence have in the matter. Intelligence can only grow through a relation of understanding with men and things around us, and this is acquired gradually. It is the special function of teaching to help to develop it. If we ask *how* intelligence does direct our actions we may make clear to ourselves the real nature of knowledge. We may also bring home to our convictions that much of what is commonly called knowledge is mere erudition which has no bearing of any kind on life, whether practical, intellectual, artistic, moral, or religious. I believe it is only when a teacher recognizes by investigation of his own experience that much which he has learnt has neither enriched nor guided his life that he will address himself seriously to eliminating from his own teaching all such useless lumber.

Turning, then, to the real knowledge he has acquired, it is essential that he should find out how it developed in his own life. For, as Bacon says, the teacher's task is to "transplant knowledge into the scholar's mind as it grew in his own." He may take any typical pieces of knowledge—gathered from direct observation and thought, from books, from reasoning—and in each case ask himself what activity of his own was concerned and what part that activity played in the acquisition; whether the knowledge would have been more real and effective, or the acquirement more rapid, had other forms of personal activity been brought into action; what share was taken by his teacher. In such a determination he should at each point consider whether a change of

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emphasis or proportion would have improved the result. He may, for example, in the case he is investigating find that his teacher actually gave him a great deal of help and guidance. He should then try to decide how much of that was necessary, how much not actually necessary but decidedly acceptable and helpful. All the rest he may mark as mistaken zeal, and try to avoid similar errors in his own dealings with his pupils.

In such enquiries as these he will find comparison with the results of others similarly engaged not so much useful as indispensable. For we do not all learn alike, and we are apt to think we do. To take what is certainly one of the most commonly ignored points of difference. Some people build up, retain, and recall much of their knowledge in the form of vivid mental pictures. They see the scene described, the page of the book on which the mathematical problem is worked, the map of the country. They are apt to believe that all other people do the same, and to base much of their teaching on that supposition. For example, this assumption underlies what is known as the Gouin method of teaching foreign languages. But the assumption is not true. Many people can only visualize dimly, some not at all. I generally find at least half of a class of university students among the former, and I myself belong to the latter. The common tendency to assume that others are mentally like oneself was charmingly illustrated by the artless enquiry made of me in private, and in all good faith, by a student after a class-discussion in which I had confessed and tried to explain my deficiency in this respect: "But, Professor, you *can* think, can't you?" So by consultation the student will

find that there is individuality in learning as in other forms of human activity, and he will endeavour to adapt his teaching so as to catch all in his net.

If one approach the examination of mental life in this way one is not in danger of ignoring the all-important fact that real learning is only possible through self-activity. And self-activity is activity directed by purpose and prompted by desire. This general attitude towards the subject studied is what is properly called interest. Let the reader ask himself what he really means when he says he is interested in this or that. Is it pleasure? or amusement? or entertainment? When am I interested in solving a problem? Surely, *before* I have solved it. And if I am really interested in the thing at all, my state of mind during the solution is one of unrest and tension, by no means one of quiescence and enjoyment. I keep on because I value and desire the end, not because I enjoy the means. If I do enjoy them so much to the good, but really the matter affects me but little.

That, the reader will agree, is interest in adult life. Let him now look back, calling to mind the pursuits which engrossed—that is, interested—him in earlier years. Let him make clear their nature and their relation to his life at the time. In a word, let him ask *why* he was interested in them. Let him then consult with others who have made similar private investigations. There can be little doubt that he will then appreciate the fundamental difference between making lessons interesting to children, and making the children interested in the subjects on which the lessons are given. Further, he will have gained some accurate, if not adequate, idea of the kinds of pursuits into which

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children at various ages throw themselves most wholeheartedly.

I hope I have succeeded in making clear what is the kind of introspection that is helpful to one who is about to enter on a study of the main lines of mental development. It must be a preliminary to such study, or the knowledge derived from books will be mere erudition, not a living influence in the work of education. But it is not done once for all. The true psychologist never ceases to look within himself for help in understanding others. Always it is introspection into life, and consequently it is mainly of the nature of retrospection over the past. Not, however, of fixed points in the past—'mental states' as they are called—but always into the living process of growing experience. One must constantly bear in mind the fundamental character of mental life. "It does not consist in the connexion of unalterable objects and varying conditions: in all its phases it is *process*; an *active*, not a *passive*, existence: *development*, not *stagnation*. The understanding of the basal laws of this development is the final goal of psychology."¹

The psychological equipment of an educator is evidently a task of much difficulty. But if the reader be convinced that such preparation will vastly contribute towards efficiency he will surely not shrink from the strenuous and deep thinking which it demands. Everything which throws light on mental life will be welcomed, whether it appear under the name of psychology or not. Indeed more real insight of the kind the educator needs is often to be obtained from such a profound study of human character and motive as *The Egoist*

¹Wundt : *Op. cit.* p. 454.

of George Meredith than from works on abstract analytic psychology.

Nor will the fact that, after all, the best psychological knowledge he can gain is imperfect and full of gaps and obscurities discourage him. As Froude puts it: "Our knowledge of any man is always inadequate—even of the unit which each of us calls himself; and the first condition under which we can know a man at all is, that he be in essentials something like ourselves; that our own experience be an interpreter which shall open the secrets of his experience; and it often happens, even among our contemporaries, that we are altogether baffled. The Englishman and the Italian may understand each other's speech, but the language of each other's ideas has still to be learnt. Our long failures in Ireland have risen from a radical incongruity of character which has divided the Celt from the Saxon. And again, in the same country, the Catholic will be a mystery to the Protestant, and the Protestant to the Catholic. Their intellects have been shaped in opposite moulds; they are like instruments which cannot be played in concert."¹

The educator will recognize not only that such imperfection in knowledge of others is inevitable, but that we should not desire to have so thorough an insight into the lives of our children that nothing lay hid from us. In every soul there are sacred recesses into which the intrusion of even the most sympathetic friend is a profanation. Such knowledge as will make us serviceable we do well to seek, but to that we should limit our desires.

This raises in many minds an objection to a method

¹ *The Dissolution of the Monasteries* in *Short Studies on Great Subjects*, vol. i. p. 407.

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of trying to gain general knowledge of the inner lives of children and young people by getting a large number of them to answer sets of questions. Great care is certainly needed when such a procedure is followed that the questions are such as a stranger has a right to ask, such as can be answered without morbid introspection, such as give no temptation to posing, and such as are not likely to yield answers vitiated by imperfections of memory. Great caution is also demanded in drawing inductions from the answers to decide whether they come from really typical young people or whether the replies of those who are somewhat excessively emotional, if not morbid, preponderate. Many of the researches on adolescence which have been made by this method seem peculiarly open to these objections.

But probably the educator to whom this book appeals will leave such investigations to those who have more leisure than himself. Nor is it likely that he will take a personal part in the experiments of a psychological laboratory. He will welcome any fresh light which may come to him from either of these modes of enquiry, or from any other which psychologists may invent. But his own energies will be directed to gaining a serviceable knowledge of his own charges by observation of their daily life both as individuals and in the communities of class and school. Were he to publish the results of such study in educational journals or as monographs both a rapid and a safe advance in educational psychology might confidently be anticipated.

CHAPTER III

BODILY ENDOWMENT

THE most obvious thing about ourselves is that we each have both a body and a mind or soul. Common speech, indeed, often distinguishes further between mind and soul, using the former term to denote our intellect—that is, our power to think, reason, and the like, and restricting the latter to our higher and more spiritual selves—our ability to love and seek the good. Sometimes the division is expressed differently, and man is divided into body, soul, and spirit, where soul seems to correspond with ‘mind’, and spirit with ‘soul’, of the former distinction. Psychology, however, needs no such three-fold division. For it ‘soul’ or ‘mind’ is indifferently the name of all in human nature that is not body.

Philosophers have disputed for thousands of years as to the ultimate nature of both soul and body, and as to the relation of those ultimate natures to each other. Into such metaphysical questions—profoundly interesting as they are—there is no need for us to enter. We know quite well enough for the purposes of education what we mean by mind and what by body. We find no practical difficulty in drawing the line between them, and we recognize that, whatever may be the metaphysical explanation, mind and body, as given in direct

experience, act upon each other. Our wishes are carried out through bodily actions ; our feelings are shown in gesture and facial expression ; sudden violent emotion may kill ; long continued thinking makes us bodily tired and, it may be, gives us a headache ; bodily fatigue due to physical exertion unfits us for mental work ; the breathing of vitiated air renders us intellectually dull as well as physically anaemic ; illness overthrows our mental powers ; a blow on the head may cause unconsciousness ; various drugs produce hallucinations ; the general state of health and of the functioning of the organs of respiration, circulation, digestion, secretion, and excretion, is reflected in the hopefulness or mournfulness of our outlook. We know it is better to ask a favour of a man after a good dinner than before it, that irritation is most readily aroused, whether in another or in oneself, during fatigue. Some people are much affected emotionally by states of the weather—are happy in sunshine and more or less miserable and despondent in dull, foggy, or rainy weather, or are made morbidly irritable by heavy wind.

Though this kind of general connexion is commonly recognized as a fact, yet its importance for all that concerns mental life, and therefore for education, does not seem ever to have been fully acknowledged in practice. That severe illness incapacitates for mental effort is not questioned ; but that *every* change of health and of general bodily condition carries with it a corresponding change in mental health and power has not been given its full importance.

The schoolmaster of tradition was apt to show his appreciation of the influence of bodily feelings on mental life by a free use of the birch, but he was much less ready

to trace stupidity to bad ventilation or to impaired health, due, it may be, to overwork. Yet performance is limited by capacity, and capacity is far from being a fixed quantity. We all know that there are times when we get through our work both quickly and efficiently, and, withal, with enjoyment ; and that there are others when, strive as we may, but little is accomplished, and that generally of inferior quality. The cause of such differences may, indeed, be mental. They may be due to some brooding trouble which hinders us from throwing ourselves fully into our task. But much more often our minds are at rest ; it is our bodies that are in some way out of order.

Children, who have not attained the adult's stability of organization, either in mind or in body, are even more affected by external influences than we are. That their minds may work easily and effectively their physical surroundings must be such that the vital bodily processes are not hindered. Happily, this is being more and more recognized in respect to the hygienic conditions of schools. Probably but little fault in this respect can be found with the majority of recent buildings, but economy still retains in use thousands of others which stand condemned before the most obvious requirements as to light and air and warmth.

Similarly, the need of children for bodily activity is being increasingly acknowledged in practice, though slowly and somewhat grudgingly. Despite all the indications of nature, children of five years old and upwards are still made to sit for long hours in desks, mainly looking and listening. Public opinion is satisfied if a few minutes daily be spent in the playground and if, two or three times a week, the children be put through some

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form of bodily drill. Even these deliverances from the desks are, however, advocated purely from a physical stand-point. Consequently, as long as bodily growth goes on normally everything is regarded as satisfactory.

- “Gymnastic for the body and culture for the mind” is now, as in ancient Athens, the accepted distinction.
- Plato pointed out that gymnastic also has an educative
 - effect on the soul, in the development of such excellent
 - qualities as courage and fortitude. Modern knowledge enables us to go further and to affirm that the relation between body and mind is so intimate and constant that
 - the intelligence is dwarfed whenever the demand for
 - bodily activity is not suitably met.

So far as many a child escapes such dwarfing it is due to his play-time and to his holidays. But these are not directly educative, for they give a merely haphazard exercise to the bodily powers. A real education employs those powers so as to train and develop bodily aptitudes and bodily skill. It is this development which is most closely connected with mental growth.

Of course it is possible to go to the other extreme and to regard the cult of the body as the one true note in education. This exaggeration must be judged worse than the other by all who regard man's spiritual nature as higher than his animal nature. To forget to train the mind is far worse than to neglect to train the body. For mind directs life, and body carries out its decrees. Moreover, as has been said, body does generally take some care of itself out of school, but mind left to itself usually makes but little advance towards the full stature of a man.

- It must be remembered that mind and body start in
- human life on an equally low scale. Though the new-

born babe shows no signs of mental life yet the potentialities of such life are there. And can more be said of the bodily life? True, the existence of the body is obvious to sight, to touch, and, it may be, to hearing. Yet what is obvious is just that and nothing more. The baby has no more human bodily powers than it has human mental powers. Each is potential; neither is real. Each will be; neither is. The babe can no more walk or talk or use its hands skilfully than it can form the purposes and plan the conduct which would require such bodily manifestations. The physiologist tells us, too, that bones and muscles, and, above all, nerves and brain are in a rudimentary stage. The child will mature as a whole human being, mind and body developing in close relation. Education to do its true work must always be guided by this knowledge. "'Tis not a soul, 'tis not a body, that we are training up, but a man; and we ought not to divide him into two parts."¹

We are all familiar with the fact that there is a close connexion between the brain and the mind. Indeed, we are often not careful to discriminate between the two terms. We say a boy or a man has a good brain when we wish to praise his intelligence. It is often assumed, too, that mental capacity is indicated by weight of brain and this by size of skull, so that a person with an unusually large head is expected to show more than ordinary mental powers, though this, if it be a rule at all, is one honoured by many exceptions.

No clearer proof of the connexion between brain and mind could be conceived than the fact that injuries to the brain have mental effects which vary with the part of the brain affected. For example, a severe blow on

¹ Montaigne : *Essay on the Education of Children*.

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the back of the head may produce blindness ; damage to the lower part of the temple may result in loss of control over the organs of speech ; an injury to the top of the head has been known to produce such general disorders of consciousness that the victim has quite lost his personality—his attitude towards his surroundings is changed, so that what before he liked now he shuns, while he seeks that which he has hitherto avoided.

- * Such facts make it clear that the brain can exert
- influence over the whole body. It is the central organ of the nervous system and its essential function is to establish connexions between various parts of that system. Into the structure of the system this is not the place to enter. The reader, however, who is not fairly familiar with it will be well advised to study it in one of the many excellent modern books which treat of the subject. Suffice it here to note that the nerves form a network throughout the body. They are not, however, continuous like telegraph wires, nor is the surface or cortex—which is the operative part—of the brain, a kind of plate of homogeneous and continuous matter like the skin of an apple. On the contrary, throughout the body the nervous system consists of a number of nerve-cells or neurones, which, though they vary a good deal in size, are all in form like thin pieces of thread, frayed at each end and at intervals along their length. These do not grow out of each other, but the ravelled threads of one lie very close to those of others, and mixed up with them. The connexions between them are those of proximity not of structure.

The special marks of neurones, as distinguished from the other cells of which the body is composed, are three : they are specially sensitive to excitation ; they transmit

or conduct this excitation though always in one and the same direction ; they are modified by their own activity so that when two sets of neurones have once acted together they are more ready to act together again, and this tendency is increased with every repetition. These characteristics show at once that the nervous system is not a ready-made mechanism but a living community of cells which by its own life, and by that alone, grows into an organism.

The impressions in any neurone are, we have said, transmitted in only one direction. There are those which pass inwards and carry messages regarding the state and experiences of the body. An important mass of these run from the great internal organs, and their combined reports are represented in consciousness by that vague yet very real feeling of well-being or its opposite which is the main constituent of our moods and a chief ingredient in our cheerfulness or gloom. Others go from the various organs of sense, each of which is constituted so as to react to one kind of impressions from the external world. All this group, because of the direction in which they transmit are called *afferent*, and because of the kind of message they convey, *sensory*. Those which conduct in the other direction are named *efferent*, and because of their effects, *motor*, for they connect with the muscles and excite them to contract or to relax. Hence they mediate both movement and the inhibition of movement. From the muscles also run sensory nerves which convey the message that the movement has been made or inhibited.

The activity of the motor neurones is dependent on that of the sensory : action is in response to impression. There is thus needed a third set of neurones whose

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function is to connect motor with sensory groups. This is the essential work of the neurones which compose the cortex of the brain, but there are other connecting neurones, especially in the spinal bulb and the spinal cord. When the connexion is made in the cortex of the brain we are conscious both of the stimulus and of the reaction ; when it is made in the cord it is immediate and independent of consciousness. Here we reach the physiological side of the process of making executive actions automatic. The connexion between a certain group of sensory neurones and a certain system of motor neurones has been made so often that the motor group is set in action in the lowest of the connecting neurones which lie near them both.

The development of the nervous system is, then, emphatically an organizing of reactions, so that the various situations of life may be met by appropriate conduct. Very few definite connexions are innate, and these are made through the lowest centres. A sharp impression on a limb leads to its withdrawal, a sudden loud sound induces a start or a cry, a whiff of pepper is followed by a sneeze whether we will or no, the eye automatically adapts itself to distance, heart and lungs respond by quickened or diminished action to various impressions. These reflex reactions involve only a simple response to a simple stimulus. They have been formed in countless generations of our ancestors, and the origin of each may be found in some form of immediate protection against threatened injury.

Far more important are the instincts, which throughout life play so fundamental a part in determining conduct. These also are due to ancestral experience and make for the preservation and advantage of the indi-

vidual. But they are both less fixed and more complex than are the reflexes. They are represented in the nervous system less by definite connexions than by strong predispositions to connexions between groups of sensory and motor neurones, and the whole circuit always involves connecting neurones in the cortex of the brain as well as in the lower centres. Hence it is that consciousness is an integral part of every instinctive act. For example, the enjoyment a baby manifests when absorbing nourishment shows that sucking is not a mere reflex action but is the expression of an instinct. In a true reflex if consciousness be present at all it is as an accidental addition which in no wise modifies the act. I may be conscious that I have sneezed, but the sneeze was not the outcome of a desire, nor can a desire not to sneeze usually inhibit the explosion, certainly not if the stimulus be at all strong. Of many small reflex acts we are quite unconscious. Many people, for example, are quite unaware, till their attention is drawn to the fact, that they are continually blinking their eyelids.

The instinctive reactions, being as a rule complex, have to be organized out of movements which at first are purely random. These 'spontaneous' or 'impulsive' movements, as they are called, attain no definite end. They are simply the outlet for the activity of a nervous system as yet unorganized. Whether any of them are outside the sphere of instinct is doubtful. In any case they are the raw material out of which purposive action has to be built.

By far the largest number of our deeds, then, are made possible only by the education of the nervous system. In life we have circuits of sensory—connecting—motor neurones of all degrees of complexity, from

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a simple act such as raising the hat, to the carrying out of wide and far-reaching purposes, such as making a fortune or writing a book, where, indeed, a whole multitude of smaller circuits are united in a regular hierarchy under one dominant regulative idea.

We need neither fear nor hope that the organization of any individual nervous system will ever reach its theoretical limits. The possibilities of connexions in the brain are far greater than any one life can realize.

- ✓ "Even if we knew the exact arrangement of each
- ✓ neurone in a man's brain it would take a model as large
- ✓ as St. Paul's Cathedral to make them visible to the naked
- ✓ eye, a model with whose details only years of study
- would familiarize us. Consider that counting at the
- rate of fifty a minute it would take a man working twelve
- hours a day over two hundred years merely to count the
- nerve-cells of one man."¹

- In general plan such a nervous system is common to
- all. But only in general plan. Individuals have no more the same possibilities of nerve and brain development than of muscular and osseous development. Con-
- jointly with such differences will be found differences in mental qualities. We are, therefore, interested to enquire whether any general relation can be established between physical and mental attributes. Certainly we are all more or less influenced in forming our first opinion of another's intelligence and disposition by his physical appearance, though we should generally be at a loss to say exactly what signs had influenced us, and in what way they had done so. Facial expression and brightness or dullness of eye have, no doubt, much to do with an estimate.

¹Thorndyke : *The Elements of Psychology*, p. 151.

Can we then find a bodily measure of intelligence? The idea is a tempting one, for bodily qualities can be measured and reduced to scale. Roger Ascham apparently thought that only boys of "a cumlie countenance, with a goodlie stature" were worthy to receive learning, and the old aphorism "a sound mind in a sound body" expresses the desired relation more generally.

Yet when we pass in review our acquaintances we are bound to admit that the bodily side of the relation is not to be found in height or girth or muscular development. We all know instances of children and of adults whose physical size is by no means in accord with their mental powers. "Great men have been small, and small men great" is no paradox if the adjectives be rightly apporportioned. Researches on normal children support this result of general experience, and give no ground for expecting any connexion between size of body and power of mind.

When, however, small size of body is conjoined with general feebleness of vital functions we may expect to find it combined with some mental deficiency. Such feebleness and under-growth are all too frequently due to the physical surroundings in which the child lives—to insufficient or improper nourishment; to inadequate clothing; to want of cleanliness, of fresh air, and of health-giving play. Then it is quite the general rule that the unhappy little victim shows an arrested mental development. Both in body and in mind he is frequently two or three years behind the standard of his age. Nor, while the same unfavourable physical conditions continue to exert their maleficent influence, does he ever make up the lost ground. On the contrary, the retardation increases.

When, then, a child generally shows less mental power

than do most children of his age, of similar social rank, and attending the same kind of school, the cause should be sought first in physical conditions. Too often a child is simply classed by his teacher as 'dull' or 'inattentive' or 'a dunce,' and it is left at that. This is to take far too fatalistic a view of the immutability of what is assumed to be an inborn defect, and far too pessimistic an estimate of the possibilities of education. The first step is surely to discover the cause of the mental backwardness. Is it physical, or moral, or mental? Does the child suffer from some unsuspected physical defect, such as imperfect vision or hearing, adenoid growths, a general state of physical weakness, or the presence of some congenital disease? Or, is he wanting in perseverance and honesty of effort, and in constancy of purpose? Or lastly, is he really of poor natural intelligence, and, if so, is the defect general or particular? Many a child shows poorly at lessons which require even simple abstract thought or sympathetic imagination who is nevertheless exceptionally good in all practical occupations. It is to be feared that the school estimates of children which are based on lessons are always in grave danger of being one-sided and of doing little justice to individuals who will yet play a successful part in life. That, however, as far as it goes, condemns the school, not the child. It is only when such questions are asked and answered that the real education which that particular child needs can be effectively given.

Of these enquiries, those into physical states should be made first. Happily, the medical examination of school children will bring to light most of the physical defects. It remains for the teachers to recognize practically their mental bearings. Nor need teachers wait for

the doctor's visit to test sight and hearing, the most frequent causes of apparent dullness in children really of normal intelligence. Indeed, the medical tests are often not directly relative to the conditions of the class-room. What the teacher needs to know specifically is whether each child can read *his* writing on the blackboard and can distinctly hear *his* words when he is teaching. These points are easily—if not very exactly—tested by placing each child at the back of the class-room and requiring him to read from the blackboard, and to write from dictation, a number of disconnected words which do not suggest each other. Of course, the teacher should be careful to write in his ordinary style and size, and to speak in as even a tone as possible, and with no more distinctness than marks his customary speech. The children who fail in the test should be brought forwards until they reach a part of the class-room in which they can hear and see clearly and without strain. Such a test may further have the often desirable result of leading the teacher to write more legibly on the blackboard, and to speak more distinctly, and with a more 'thrown-forward' voice, than he has been accustomed to do. There is no doubt that these defects in hearing and seeing must be discovered in such a way as this. The children will not announce them. Often, indeed, they are unaware of them, but even when they know them they usually try to hide them.

Other defects of sense organs also have an effect on the mental life. Quite a considerable number of people are colour-blind; to them red and green are indistinguishable, and in extreme cases all colour appears as a dull lifeless grey. When we consider how much of our enjoyment is due to appreciation of colour we

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recognize how much such unfortunate persons lose. Of course, this defect is immediately made manifest in a class in which the children are taught to draw in coloured crayons and to paint in water-colours, and are allowed—as they always should be—to select their own colours.

An analogous defect on the side of hearing is tone-deafness. Just as those who are colour-blind may have excellent vision for all but colour, so the tone-deaf may be quite sharp of hearing. They are deaf not to sounds but only to differences in pitch. For them the charm of melody and the majesty of harmony do not exist. I once knew a very worthy clergyman who could not distinguish between the *Dead March* in *Saul* and Mendelssohn's *Wedding March*. This was doubtless an extreme case, but between it and the sensitive ear of the born musician are many gradations, all of which are represented in human lives. Obviously it is mere waste of time to attempt to teach music to a child with this congenital defect at all strongly marked.

Defects of taste and smell have little educational significance, and defects of sensations of movement are not usually of a very serious character. Still it should be borne in mind that individuals do differ in this as in other bodily endowments. Manual dexterity which is delightfully easy to one child remains always impossible to another. "His fingers are all thumbs" as we say, and though practice and training will do much they will never give him the deftness which comes natural to another.

It is evident that unless a teacher takes note of such bodily peculiarities of his individual pupils he may, quite unintentionally and unknowingly, do some of them very serious injustice, and he may in some cases waste some

of his own time and much of theirs in trying to do what nature has made for ever impossible. The decision whether a defect may be decreased by suitable exercises or is unalterable is evidently one which demands serious consideration, and at times medical advice. Broadly speaking, defects of hearing and sight are less amenable to remedial treatment than are motor defects, which, indeed, can in nearly all cases be lessened.

CHAPTER IV

GENERAL MENTAL ENDOWMENT

- MAN, like all other animals, is the outcome of a long
- line of ancestry, and his nature, to some indetermined
- extent, has been modified by the lives and experiences
- of his forefathers. In the history of any race of animals natural selection has been at work, so that those most adapted to their conditions of life have had the best chance of surviving, and the kinds of reactions which most effectively meet the requirements of life have, in the course of time, become embodied in the nervous system.

The more simple the life to be led the fewer are the reactions needed. If such reactions be not made the animal perishes. The more complex the life the greater necessity is there for the adaptation of reactions, the same in kind, to circumstances more or less different. Again, if the animal fail to make the adaptation he will suffer or die, according to the importance of the reaction.

- Here we have the respective functions of instinct, or
- the innate adaptation due to ancestral experience, and of
- intelligence, or the personal power of adapting action to
- more or less new conditions. Obviously, as man, even in the savage state, leads a far more complex life than do any of the lower animals, intelligence must play a larger proportionate part in the determination of his conduct

than in that of any other being. Similarly, instinct is less exhaustive of the life of a monkey or of a dog than of that of an insect. Generally, the period of immaturity of any animal, relatively to its whole life, is a rough measure of the respective shares of instinct and intelligence in determining his conduct. In that period of preparation man learns by experience to undertake that guidance of life which in the animal that matures nearly at birth rests in the sphere of instinct.

Instinct appears in its most undiluted form among the insects, and some instructive and interesting studies of the instincts of insects have been contributed to comparative psychology. Many of the lines of action observed would demand a very advanced degree of intelligence and reasoning were they planned by the insect; but this supposition is negatived by the fact that no such intelligence is shown in any other acts of its life. Yet instinct is by no means as unerring as has frequently been assumed. For instance, "The larvae of our common oil-beetle (*Melœ*) are parasitic on the bee, *Anthophora*. It deposits its ten thousand eggs without observable discrimination; but the active young larva instinctively seizes and attaches itself to any hairy object. Thousands must go astray. They have been found on hairy beetles, flies, and bees of the wrong genus. Some, however, become thus attached to the one suitable species, and are conveyed by the *Anthophora* to her nest, where they promptly eat the egg she lays."¹ Even when instinct seems most perfect the 'survival of the fittest' is secured at a heavy cost.

When we pass to the vertebrate animals we still find instinct playing a great part in the control of life, though

¹ Lloyd Morgan: *Animal Behaviour*, pp. 81-82.

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the traditional assumptions that instinct and intelligence are incompatible, and that while man is ruled by the latter all other animals are left to the former, are shown by careful observation to be untenable. More than a century ago that great naturalist Gilbert White remarked that "the maxim that defines instinct to be that secret influence by which every species is compelled naturally to pursue at all times the same way or track without any teaching or example, must be taken in a qualified sense, for there are instances in which instinct does vary and conform to the circumstances of place and convenience,"¹ and the more numerous, though not more careful, observations of later years have established the point. Darwin noted that "a little dose of judgement or reason... often comes into play, even with animals low in the scale of nature."² And Dr. Wallace wrote: "Much of the mystery of instinct arises from the persistent refusal to recognize the agency of imitation, memory, observation, and reason as often forming part of it. Yet there is ample evidence that such agency must be taken into account. Both Wilson and Leroy state that young birds build inferior nests to old ones, and the latter author observes that the best nests are made by birds whose young remain longest in the nest. So, migration is now well ascertained to be effected by means of vision, long flights being made on bright moonlight nights when the birds fly very high, while on cloudy nights they fly low, and then often lose their way. Thousands annually fly out to sea and perish, showing that the instinct to migrate is imperfect, and is not a good substitute for reason and observation."³

These conclusions of modern naturalists have a very

¹Letter 56.

²*Origin of Species*, ch. 8.

³*Darwinism*, ch. 14.

direct bearing on the only instincts which concern us—those of man. Biologists have naturally studied instinct where they have found it most free in its operations and least liable to modification by any possible interference of intelligence. This has, however, resulted in concentrating attention on the outward action or series of actions. What mental process accompanies such actions in an insect it is impossible to say: one cannot enter into the mind of a caterpillar. The practical result has been that determined activity has been made the one essential characteristic of instinct. In a word, instinct has been confined to instinctive behaviour; mode of consciousness has been ignored. It is true that none now go so far in banishing mind as the Elizabethan writer Owen, who spoke of “a naturalle Instincte engrafted in the stones or lyme...against any wett weather to sweate with great dropps of water.” But the limitation of view does lead to an undue insistence on the blindness of instinct, as, for example, when Hamilton spoke of instinct as “an agent which performs blindly and ignorantly a work of intelligence and knowledge.” An insect which does an instinctive act once, and then dies, certainly does not learn from experience, but a dog, though guided mainly by instincts, yet learns to follow their promptings in many different ways adapted to various circumstances. And, as we saw in the quotation from Dr. Wallace, practice improves the nest-building of birds.

Now, improvement and adaptation clearly imply the striving of a conscious being to improve its condition. Thus, the higher the animal the more important in the instinct is the mental prompting which finds expression in the instinctive act. The neglect of this element of

instinct accounts for the common opinion that man has few instincts, the lower animals many. What is really meant is that man has few instinctive actions which are nearly or wholly reflex in their nature, and which, consequently, show little or no improvement through practice. This, of course, is true; and it is well for us that it is so, as, evidently, the more of mechanical organization is inherited the less possibility is there of improvement. Civilization was born and has grown just because man does not come into the world a perfected mechanism.

The ordinary literary use of the word 'instinct', however, refers primarily to the mental tendency, and only secondarily to the act in which it finds expression. It was not at all a bad definition given by Paley over a century ago that "an instinct is a propensity prior to experience, and independent of instruction." The propensity is the essential point, and that springs up in appropriate circumstances without help from experience or from instruction. But whether the propensity can find one outlet or many depends on the complexity of the nervous system. The simpler such system the more the nerve-circuit may be expected to be limited, so that one definite motor reaction which, though it may be complex is always the same, follows on one definite kind of sensory impression. This is what we find in insects.

With man there is, as we have seen, an indefinite number of possibilities of motor reaction on any particular sensory impression, and though the existence of an instinct means that there is a predisposition towards certain classes of motor response to certain forms of sensory impressions yet these innate tendencies to response are not fixed and definite reflexes. They are

classes of activities rather than determined single actions or series of actions.

Further, man's instincts are not mature at birth. The undeveloped character of his brain would make this manifest if the baby's behaviour did not do so. It is as the nervous system matures that, one by one, impulses and propensities begin to manifest themselves for which nothing in the child's experience can account, and which are further proved to be the outcome of human nature by the fact that they appear in all normal children. Throughout childhood quite up to adolescence new instincts appear at intervals and old instincts take a new and more leading part in life. This means that when an instinct ripens there are many organized lines of action through which it can find expression. Moreover, it ripens when intelligence is already active in directing conduct. The instinct gives the propulsive force, the intelligence may add the directive ruling.

This is by no means to confuse instinct and intelligence. On the contrary it is to distinguish them more clearly by finding the difference in their mental nature instead of in their outer manifestations. Many an instinctive action of a lower animal attains its purpose better than an intelligent act of a child, or even of a man. A beaver builds its house and a bee constructs its comb with much greater success than would be attained by a child even after much practice. Yet the child is more intelligent than bee or beaver. And it is intelligence which counts.

Now, instinct *as a proclivity* is more or less blind : it does not foresee consequences. But such an impulse, first arising in a life under the control of intelligence and in which many lines of action are already established

while others are barred, does not issue in a blind *action*, but in one determined by habit or by planning. The control of intelligence may grow gradually. The innate proclivity may find satisfaction only in an end which is beyond the present and which can be reached only through a series of intermediate steps. To these it prompts, and intelligence may at first see but a short way ahead. "To the evolutionist, the youth courting the maid is merely obeying an impulse cunningly contrived by Nature for the preservation of the species."¹ Yet "we may say that the youth's consciousness, when he first goes courting, is to be expressed, not in the form, 'I want a wife and family', but in the words, 'I must just see her to-day'."² But, as the appropriate lines of conduct are more and more followed, the view ahead becomes longer and wider, till at length the whole meaning of the behaviour and of its emotional spring is seen. So intelligence arises in the sphere of instinct, and plays its true part of direction.

c It is well to draw attention to the fact that an instinctive propensity becomes a powerful force in life only on condition that it is given frequent and appropriate outlet in action. Here we have the possibility of education. c For, when vent is refused to an instinctive impulse it : gradually dies of inanition, or at least becomes atrophied. . On the other hand, by calling forth an instinct frequently ' and strongly we increase its power. The decision as to which instincts in any individual case the educator should wish to cultivate, and which to discourage and repress, cannot be given by psychology. The considerations operative in such questions belong to ethics and sociology.

¹Hobhouse : *Mind in Evolution*; p. 76.

²*Ibid.* p. 78, note.

Another point has a similar educational bearing. It is that instincts are stronger at one period than at another, and if they do not lead to action when they are in the nascent and growing stages any later attempt to evoke them is likely to fail. A child who has never been called on to let his altruistic instincts find expression in deeds of kindness is likely when a man to experience no sympathetic emotions strong enough to call forth much effort for the good of others.

Unless in the various circumstances of life inner impulses were felt, life could not even begin. And unless each of those impulses had a specific, though not a particular, direction, energy would be frittered away in ineffective outputs of activity, for we cannot act in general. Thus, instinct is fundamental and permeates all life. It is instinct which supplies the motive power; it is intelligence which more or less directs that power into effective channels. Especially is this manifest with a child, in whose conduct intelligence counts but little in comparison with impulse. But even with the wise adult instinct has sway, though it may be overlooked because reason guides the conduct to which it impels. Always there is something more than reason in the attraction we feel towards particular lines of action. "Speaking generally, man is only in part conscious of his own purposes in their real meaning and value. It is his own nature—of which, after all, he only knows the surface—which sets him his purpose, and impels him to carry it out."¹

Every instinct is more or less specific. It is a special method of meeting particular situations, or calls for action. The adaptation due to intelligence takes the

¹ Hobhouse : *Op. cit.* p. 75.

two-fold form of increasing the range of origin and of modifying the mode of reaction.

Events do not happen in life in isolation, nor do they disappear and leave no trace behind. Thus, our experiences get bound together, and a recurrence of one may recall to mind others which in some points resemble it, or which formerly occurred with it. Nor is this result merely intellectual. If the original experience moved us, we are moved similarly, though generally less strongly, by its recall. In this way an instinct may be aroused by some thing or event or even remembrance which did not originally awaken it. A picture of a loved friend will, for example, immediately evoke the instinct of tenderness, while something which reminds us of an enemy may arouse anger. The remembrance of an occasion when one made oneself conspicuously ridiculous gives one a very effective repetition of the feeling of shame which attended the original mistake. A horse shies at a coat by the side of the road: the original instinct was to avoid a crouching animal, but it has acquired a sufficiently wide reference to be called into play by anything which has the same general appearance. Such extensions greatly enrich our lives. The original reference of our instincts was, doubtless, in every case to something which affected our bodily welfare. By extension to associated and analogous experiences they are made responsive to what may be called moral, as distinct from physical, occasions.

The corresponding increase on the side of expression has been more generally recognized. It is, of course, limited by structure. In fleeing from a pursuing dog a rabbit does not take to the water nor attempt to climb a tree. But within such limits the more intelligent the

animal the greater is the variety of instinctive response. A dog when threatened with a whip will make a great many different movements, all expressive of the instinctive fear which animates him. With man the forms of instinctive reactions are often determined by social customs. When the instinct to fight seeks to find expression in act, an Englishman raises his fists, an Irishman flourishes his shillelagh, an American draws his revolver, an Italian flies to his knife, a Frenchman arranges a duel with swords or pistols. In more sedate circles the same instinct may find expression in a law suit, while among the saints of the earth it may take the negative form of "heaping coals of fire on the enemy's head."

Thus, in the ever-changing life of man, while the emotional nucleus of an instinct remains broadly constant, both the means of arousing the instinctive feeling and the forms in which it finds expression are very varied and are much generalized. This is important in the development of human experience, for it may happen that several instincts are evoked by a given set of circumstances, and then tend to become compounded or fused. Thus arise more and more complex emotions influencing conduct in more and more complex ways, sometimes, indeed, impelling one in incompatible directions. It is, then, to the emotional impulses we must look if we would understand the instincts of man.

Perhaps the time may come when these instincts may be thought as worthy of careful and systematic study as those of spiders or of ants. At present the amount of scientific observation which has been devoted to the human instincts is much smaller than has been lavished on those of the lower animals. So much, indeed, is this the case that there is no thorough-going agreement as to

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to what instincts man has. Darwin, taking instinctive behaviour as the test, thought that "man, perhaps, has somewhat fewer instincts than those possessed by the animals which come next to him in the series."¹ On the other hand, the late William James, holding that every innate tendency is an instinct, wrote "no other mammal, not even the monkey, shows so large an array."²

Certainly, taking account of the adaptations of which we have just spoken, man's modes of instinctive behaviour are very varied, but, as has been said, this does not carry with it an equal diversity in the emotional propensities which are the central and constant parts of instincts. Failure to connect instinctive actions with primary emotions has led both to disagreement as to the number of human instincts and to the frequent reduction of the psychology of the emotions to little more than hortatory description. M. Ribot³ and Mr. McDougall⁴ have done good service in insisting that the emotion and the instinctive act are always parts of one and the same life-process, and to their writings this part of our discussion owes much. The attempt to classify instinctive acts is, then, subsumed under that of trying to distinguish the elementary emotions, that is, those which cannot be reduced to simpler forms. The number of these is certainly limited.

We see in every original human instinct a full mental process which develops with experience and repetition till it is easy to find within it the aspects of knowing, feeling, and willing, which at first are obscure and confused. Even in adult life these are not separable in fact but only

¹ *Descent of Man*, chap. 3.

² *Principles of Psychology*, vol. ii. p. 441.

³ *La Psychologie des Sentiments*.

⁴ *An Introduction to Social Psychology*.

distinguishable in thought. We cannot feel emotion without being prompted to act, and we can neither feel nor desire except in reference to something of which we are cognisant. One factor, no doubt, may be temporarily dominant. A burst of emotion may sweep away all considerations of prudence and cause one to depart altogether from the line of conduct one has determined to follow. Or a feeling which has become the ruling passion in life may bind both will and intelligence to its chariot wheels so that they are used mainly, if not exclusively, in its service. Yet though intelligence and will then play less than their normal parts, in neither case are they absent. They put the brake on the violent emotion, and they keep the passion within more or less legitimate bounds. Similarly, a student at work may be mainly putting forth an activity essentially intellectual, yet his impulse to do this work remains throughout an undercurrent which really determines the course of his thoughts. And that impulse is both emotional and volitional. Or lastly, a person may be fully engrossed in carrying out a purpose, say, in winning a race. Yet intelligence is there as a quiet guide, leading him to avoid obstacles and to make the required turns; and unless he were impelled by such feelings as desire to win, to surpass his competitors, or to test or exhibit his speed and endurance, he would not have engaged in the race at all.

In every act, then, all three fundamental aspects may be distinguished. But they are not independent elements entering in various proportions into different combinations. Each is dependent on the others and interpenetrated by them, and in themselves they are nothing but the abstract results of our analysis of concrete mental

life. Often, indeed, we cannot make the distinction with any certainty or definiteness. Take one's attitude towards a beautiful work of art. Can one separate the emotional from the intellectual elements in one's admiration, or say how the whole is permeated by volition?

- As life develops the connexion between intelligence and instinct becomes closer. The instinctive propulsion towards certain modes of acting remains, but experience and intelligence act upon it till blind craving becomes deliberate purpose and impulsive act is absorbed in planned conduct. "So that human life is permeated through and through with instinctive action, determined in part, however, by intelligence and volition."¹

The most elementary instincts are those directly connected with the preservation of life, and these are the first to show their presence in the life of the infant. The earliest of all is the instinctive seeking for food prompted by the feeling of hunger. It may be objected that hunger is not an emotion but an appetite. The distinction implied is that emotion is mental and appetite bodily. It has, of course, long been recognized that when an emotion is experienced there are bodily manifestations, either in outward act and gesture or in some kind of disturbance of the vital processes. But these were held to be the results of the emotion, and to follow it. A recent theory—associated with the names of Lange and James—exactly reverses the traditional order. According to this theory, the outward event or inward thought which occasions the emotion first leads to bodily disturbance, and the emotion is the echo of this in consciousness. Each theory seems to set the mental and the bodily too far apart. It would seem a truer view that

¹ Wundt: *Lectures on Human and Animal Psychology*, p. 397.

the mental and the bodily disturbances arise together, and that each is one half of the total reaction of the whole man on the circumstances. Adopting this view the distinction between appetite and emotion becomes merely one of origin. An appetite is due to a certain state of some of the vital organs: an emotion arises on the presence to consciousness of something in the external world, or of the memory of such an external stimulus. Each is a disturbance both of mental calm and of regular vital functioning.

Further, it may be remarked that such an appetite as hunger and thirst develops in the course of life to what is undoubtedly emotion. As experience widens the impulse to seek food for oneself enlarges, by union with other instincts, into all those wide-reaching desires and purposes which are connected with the support and advancement of one's family. Of course, the primordial appetite remains, but it is only the nucleus of a broad set of tendencies.

The second instinct surely seen in the infant is that of fear. This manifests itself in a shrinking from the feared object and in a cry which the mother can distinguish from those of anger and of bodily discomfort. As soon as the child can run the shrinking develops into flight and concealment. There is thus a double bodily reaction; for while fear by itself tends to paralyse activity and is marked by lessened heart-beat and respiration, flight needs increased activity which causes accelerated respiration and circulation. Yet this increase is not normal. The heart throbs painfully and the breath is short and hurried—the child running away in fear pants rather than breathes. This shows that both the stimulating influence of rapid movement and the inhibition

which attends the fear are operative and are interfering with each other. When the fear is intense, the inhibition may prevail. Birds are said to be 'fascinated' by certain snakes, which means that fear has entirely inhibited flight. So a man stands appalled before a great and irretrievable disaster. If the heart be weak great fear may cause death, and even with normal lives the same extreme case of inhibition is not unknown.

Fear is provoked by what seems to threaten, but it is proportioned not only to the amount of danger apprehended but to the extent of loss the feared act would bring if it were accomplished. For example, a man is apt to fear robbery more than usual when he has a considerable sum of money in his possession, even though the real danger is no greater than at other times. Similarly, "whether the height on which we stand be elevated only a few feet, or have beneath it a precipitous abyss of a thousand fathoms, our footing, if all other circumstances be the same, is in itself equally sure. Yet, though we look down without any fear on the gentle slope in the one case, we shrink back in the other case with painful dismay."¹

Fear has played an important part in the history of the race. In our admiration of courage we are apt to lose sight of the fact that at times "discretion is the better part of valour," and that to avoid dangers is sometimes the only way to escape them. If this be so in civilized society it was obviously yet more so in those early days when each man carried his life in his hand, threatened not only by his fellows but by beasts and by forces of nature of the powers of which he was ignorant and behind which he imagined spirits generally malig-

¹ Brown: *Philosophy of the Human Mind*, lecture 65.

nant. Hence arose that instinctive dread of the unknown which still shows itself plainly in children, which ever predisposed mankind to superstition, and which still to some extent haunts the minds of most of us. Many an adult who really disbelieves in ghosts would yet shrink instinctively—no matter what his intelligence might say—from passing a night alone in a room in which a foul murder is known to have been committed and in which the victim is reported to appear at a certain hour. The fear of ignorance is often apparent in the vague anticipation of hardships and dangers which many a timorous woman feels on behalf of a relative or friend who is about to go into a distant land.

As fear is an original part of our nature it is impossible, even were it desirable, to eradicate it. The educational task is to attach it to those things, and to those only, that are worthy of being feared. Thus from physical shrinking it may be developed into moral sensitiveness. Intelligence, exercised on increased knowledge and prompted by example and suggestion, is the one instrument for effecting the transformation.

This leads us to the social value of fear. Had man not known fear, society would have been impossible, for society involves the enforcement of obedience to laws and rules. It has been said that all society rests ultimately on force. Certainly with all promiscuous societies the world has yet seen this is the case. Some members are restrained—if restrained at all—from violence and lawlessness only by fear of imprisonment or of execution. Only in more select and smaller communities is the moral fear of social disapproval of wrong-doing a sufficient curb, while only the choicest spirits are independent even of this, and feel fear only at the wrong-

doing itself. In most minds these two forms of moral fear are combined in varying proportions. Whether or no the fear of physical force be present, this moral fear is essential to every society. In primitive communities it is connected with the dread of the unknown, "that awe of the Divine Nemesis which was felt by religious pagans, and, though it took a more positive form under Christianity, is still felt by the mass of mankind simply as a vague fear at anything which is called wrong-doing. Such terror of the unseen is so far above mere sensual cowardice that it will annihilate that cowardice: it is the initial recognition of a moral law restraining desire, and checks the hard bold scrutiny of imperfect thought into obligations which can never be proved to have any sanctity in the absence of feeling. 'It is good', sing the old Eumenides, in Aeschylus, 'that fear should sit as the guardian of the soul, forcing it into wisdom—good that men should carry a threatening shadow in their hearts under the full sunshine; else, how should they learn to revere the right?' That guardianship may become needless; but only when all outward law has become needless—only when duty and love have united in one stream and made a common force."¹

Fear has its place, then, in school as in other communities. But it should be fear of wrong-doing, not mere fear of personal suffering. It should rather be an unconscious factor in the determination of conduct guarding from wrong acts, than a dominant and insistent motive prompting to right acts. For we have seen that fear tends to inhibit activity, and that is even more true of the mental than of the bodily forms of activity. A child terrorized by threat of punishment—which all

¹ George Eliot: *Romola*, ch. 11.

too frequent experience assures him may be confidently expected to be carried into execution—is simply inhibited from thinking or remembering. His brain is numbed. And it must be borne in mind that there are weak as well as strong natures, and that defect of physical tone predisposes to all the emotions characteristic of weakness. "In a weakened organism fear is always in a nascent condition."¹ On the other hand, on some children such threats may have no other effect than to arouse resentment. These are the matter-of-fact little people who do not bother their heads with representations of the future. Always they despise every danger which is not immediately present, for they really do not see the risks. Much of what is commonly called physical courage, as distinguished from moral courage, is rooted in such insensibility. "In many persons the absence of fear only amounts to the absence of imagination."²

Lastly it may be noted how an attitude of fear towards parent or teacher shuts out the child from that intimate personal communication without which there is no real training of character. In other words, a parent or teacher who inspires real personal fear has little or no true influence over his child. Dickens has well remarked: "Few people know what secrecy there is in the young under terror. No matter how unreasonable the terror, so that it be terror."³

What threatens does not, however, always arouse fear or prompt to flight. If the danger seem small, or if the individual threatened be bold and energetic, he feels anger, and is prompted to express that feeling in some form of aggressive action. This pugnacity is much

¹ Ribot: *Psychology of the Emotions*, Eng. trans. p. 212. ² *Ibid.*

³ *Great Expectations*, ch. 2.

more marked in some races than in others—in the Sikhs, for example, much more than in the Bengali. Nor do individuals of the same race differ less among themselves. Thus, what provokes fear in one may arouse anger and resistance in another.

The organic concomitants of anger are the opposite to those of fear. There is acceleration of respiration and heart-beat, the face generally flushes, the muscles are braced, often the teeth and the fists are clenched. A general appearance of restrained tenseness marks the emotion so long as it does not find vent in violent speech or action. Yet the innervation is spasmodic, as is shown by the raucous voice, by the abortive movements of the hands and arms, and sometimes by the pallor of the face following upon, or taking the place of, the usual flushing. Tracing these back to their origin in the history of the race Spencer says: "What we call the natural language of anger is due to a partial contraction of those muscles which actual combat would call into play; and all marks of irritation down to that passing shade over the brow which accompanies slight annoyance, are incipient stages of these same contractions."¹

No emotion is so liable to get beyond control as that of anger. The reference to the self is extremely intimate, and the instinct of self-assertion, with which we shall deal presently, is likely to be awakened with it and to add a cumulative force. Nor can anger be directly and immediately controlled by reason. True, its mode of expression may be changed, but in the change the two instincts together are likely to develop into such complex and more permanent emotions as hatred or envy, and the impulse to aggression to be transmuted

¹ *Principles of Psychology*, part ix. ch. 7.

into the purpose of revenge. The only effective way to check anger is to arouse another and opposed instinct, such as the general one of tender regard for others or the more specific one of love for an individual, each of which finds expression in acts of kindness instead of in those of hostility. The struggle of anger and love in a passionate soul is powerfully exemplified in Othello :

“Ay, let her rot, and perish, and be damned to-night ; for she shall not live : no, my heart is turned to stone ; I strike it, and it hurts my hand. O the world hath not a sweeter creature.”¹

And again, when he kisses Desdemona immediately before he smothers her :

“Ah, balmy breath, that dost almost persuade
Justice to break her sword ! One more, one more :
Be thus when thou art dead, and I will kill thee,
And love thee after : one more, and this the last :
So sweet was ne’er so fatal. I must weep,
But they are cruel tears : this sorrow’s heavenly ;
It strikes where it doth love.”²

When restrained within due limits, however, anger plays an important part both in the individual life and in social relationships. As self-control is developed, the emotion, when excited by non-personal obstacles, becomes a source of energy and an impulse towards the overcoming of difficulties. In common parlance we should not speak of it then as anger ; indeed we have no special name for it. But the action to which it prompts is aggressive, and the feeling towards what hinders us is always of the same general nature, whether the hindrance be due to the action of another or to the obstinacy of things.

¹ Act iv. sc. 1.

² Act v. sc. 2.

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The extension of anger to acts which do not affect oneself is commonly called indignation. At the root this is anger compounded with tenderness for the sufferer. "If it were in our power to trace back our emotions through the whole long period of our life, to our boyhood and our infancy, we should find, probably, that our most vivid feelings of early resentment, if I may use that term in such a case, were not so much what is commonly termed anger, as what is more commonly termed indignation. Our deep and lasting wrath in our nursery is not against any one who exists around us, but against the cruel tyrant, or the wicked fairy, or the robber, or the murderer, in some tale or ballad. Little generosity in after-life can be expected from him who, on first hearing, as he leans on his mother's knee, the story of the Babes in the Wood, has felt no swell of anger, almost to bursting of the heart, against the 'guardian uncle fierce', and who does not exult in the punishment which afterwards falls on that treacherous murderer, with a triumph more delightful than is felt by the most vindictive in the complete gratification of their own personal revenge."¹

When it is considered further that similar feelings may be excited in all, or most, members of a community when a cruel crime is committed, and that what we feel in common with others we feel most strongly, we see how this generalized anger takes the form of social punishment, or retributive justice.

The existence of the next two instincts was first recognized by M. Ribot, who called them positive and negative self-feeling. They play, however, a very important part in the development of life. We get

¹ Brown : *Op. cit.* lecture 63.

nearer to ordinary speech if we term them self-assertion, and self-abasement. They are somewhat akin to anger, and fear respectively, and are often excited with them. But they are by no means the same; for while anger and fear are centred in others these are essentially concerned with the self. The former has for its organic concomitants a general heightening of vital functions, and expresses itself in an expansion of the whole body which "swells with pride". The latter has exactly the opposite characteristics. Each is excited by comparison of oneself with some other person or thing. In the one case we feel ourselves superior, in the other case inferior. The cock strutting in the farm-yard and the child calling upon all and sundry to "see me do this" are examples of simple forms of self-assertion. The same child shrinking under reproof and the shame of detection in a forbidden deed manifests the opposite instinct.

The former is obviously the root from which may spring pride and vanity as well as true self-respect. United with the energy of pugnacity it brings man into rivalry with his fellows. Then we have emulation, or, the impulse to try to excel, which is so important an incentive to effort. The boy learns to delight in his superior strength and skill, as does the man in his eminent intellect or in his conspicuous worldly success. Unmodified by kindly feeling towards others emulation may easily degenerate into envy and malice, but kept within legitimate bounds it is a spur which is needed by the vast majority of mankind.

Self-abasement has its part to play as a corrective to excess of self-assertion. To esteem oneself at one's real worth—neither over-estimating in pride nor under-

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estimating in unreal humility—is the true wisdom of life.

Individuals differ in the strength of these two instincts. The well-balanced mind which estimates both self and others at their real relative values is rare. Education should try to reduce undue self-confidence and to mitigate undue self-depreciation. In each case the means is obviously such comparison with the work of others as will bring home to the child the true worth of his efforts. For a morbid self-assertiveness renders a man anti-social. Too high an esteem for self easily passes into contempt for others which is akin to hatred. On the other hand, no energetic service is to be expected from an individual who hesitates constantly in self-distrust, shivering on the brink of every enterprise. He also, in his negative way, is an "enemy to the republic."

As at times each one of us is brought into relation both with our superiors and with our inferiors it is certain that in every life there is occasion for the activity of both these instincts. It is evil, however, when the one takes the form of bullying the weak and the other that of cringing to the strong. Few people are more contemptible than the Uriah Heeps of this world.

The primary emotions we have so far considered are egoistic. They make for the good of the self but do not prompt to action for the good of others. The latter tendency is, however, as innate as the former, and shows itself very early in the baby's smile of recognition of its mother and in the caressing touch. The child then gives the first sign that it is beginning to distinguish between itself and its surroundings. Hitherto its experience has not made even this primary differentiation.

In the history of the race, and in comparison with the lower animals, the original form of a tender regard for others is found in maternal love. That this, in its primitive form, is still a strong impulse in girls is proved by their delight in 'mothering' children younger than themselves and in playing with dolls.

The first extension of this maternal instinct probably made it parental. Little paternal love exists among the lower animals, and in the primitive races of mankind the tie is very weak. It would thus seem to be an extension of the primary instinct of maternal love, originating through the establishment of permanent family relations. Similarly, extension to other members of society could only be made when mankind began to live in peaceful communities bound together by relations of mutual help.

Many attempts have been made to deny that altruism is a true spring of conduct, and to reduce every act to one of self-love. "Self-love is the spring of all our actions and determinations" said Voltaire, and this was the favourite doctrine of those eighteenth century philosophers who proudly called themselves the 'Enlightened.' The same doctrine has been advanced many times since. "Tender feeling is as purely self-seeking as any other pleasure, and makes no enquiry as to the feelings of the beloved personality," wrote Dr. Bain.¹ Of course, as it is a primary emotion, it can only be known by being felt. If any individual can truly affirm that *he* has never felt any tenderness towards others, obviously no one can confute him. But if he imagine that he has thus established a general truth it is as if a man born blind were to deny the existence of light and colour and all that

¹ *The Emotions and the Will*, p. 80.

sight gives the normal man. Human nature would, indeed, be a poor thing were altruism not an original ingredient in it. Out of so simple an emotion develops, in various circumstances, sympathy, gratitude, pity, benevolence: indeed, all that really binds man to man and makes life worth living.

The close connexion of tender feeling with pugnacity must be noted. When the chicks are attacked the mother-hen, timid as she usually is, will show fight. The same holds throughout. Anger and indignation are as surely moved by an injury to one we love as by an attack on ourselves. If, in addition to love, there is also a protective feeling due to the weakness of the loved one as compared with ourselves the anger is even more easily aroused and is less easily abated. Do not our hearts burn within us when we hear of cruel treatment of a child? Indeed, do we not so overflow with tender emotion and anger that we are indignant with any cruelty, whether its object be one of ourselves or one of the lower animals? Who has not seen the little child weep in compassion over an injured toy? Was such weeping due to self-love? we would ask the advocates of universal egoism.

We have, then, in the union of anger and tenderness those outpourings of indignation which we have already considered. Anger guards what tender feeling cherishes.

The last of the instincts to be developed is that of sex. This, like hunger, has its basis in an organic appetite, and with many of the lower animals it has not advanced beyond that stage. In the higher vertebrates, however, there is conjoined with it that attraction of individuals of opposite sex for each other which among men has always been one of the most powerful motive-

forces of conduct, and one of the greatest and most frequent causes of individual happiness and misery.

The connexion with pugnacity is even more obvious than in the case of the tender emotion. For sexual love has an element of self-feeling which is powerful in proportion as the appetite enters into it. Thus, rivalry rouses anger against a personal injury and not merely because of a conviction that the happiness of the loved one is threatened, though this, well or ill founded, is regularly present. The jealous man or woman is, of necessity, an egoist, though the egoism may be mixed with regard for another, and even concealed by it.

The appearance of this, the most powerful of the instincts, at the comparatively late age of puberty enables its manifestations to be studied with greater ease than those of instincts which are developed earlier. The child is quite devoid of the instinct; in the young boy or girl it is nearly inoperative. At puberty it begins to show itself by a vague emotional unrest, of the nature and object of which the boy or girl is naturally unaware. There is some disturbance relatively to the other sex. The boy, when not in the presence of girls, is full of self-assertion in his imagined intercourse with them: in their presence this commonly gives place to confusion and bashfulness. The girl generally becomes coy and self-conscious. In the case of each sex there are occasional lapses into the attitude opposite to the prevalent one.

Emotionally sex is the richest of the instincts. Consequently, its emergence into activity carries with it a deepening of the emotional life, a tendency to self-analysis, a longing for wider and deeper realms of feeling. So adolescence is the age for enthusiasms; and, amusing

as the enthusiasms of youth may be to the cold-blooded cynic, ill is it with the soul in which they are not felt. For enthusiasm supplies a vent for the overflowing emotions and thus hinders them from being turned back on themselves and developing that morbid self-consciousness which is the characteristic danger of the years when the new force within is too great to find issue in the accustomed channels. If only the enthusiasms be healthy and be concerned mainly with others they are good.

An important safeguard, too, is a healthy interest in bodily exercise, especially in organized co-operative games. Nor should the effect of giving the elder boys authority and responsibility in the school community, and thus supplying a continual outlet for their exuberant energy, be overlooked.

- The instincts of maternal love and of sex are the
- foundation on which the whole structure of the family
- has been built. In the family the tenderness for others
- which first appears as the love of the mother for her
- offspring finds its most natural extension.

- The union of the two instincts of tender emotion
- and anger is increased in strength and force by that innate
- tendency of animals of the same kind to live together,
- which is found not only in man but in many of the lower
- animals, and which, for want of a more beautiful name,
- we must perforce call gregariousness. The herrings
- swim in schools, the bisons roam in herds, the British
- workman foregathers at Margate or at Blackpool, society
- has its crushes, and generally, people go where others
- go, often for no better reason than that the others *do*
- go. Few can enjoy a solitary country walk, no matter
- how beautiful the scenery, and many cannot endure their

own company even for an hour. Even without conversation the presence of others is felt to be 'company'. Of the ordinary man it is true that "to be alone is one of the greatest of evils for him. Solitary confinement is by many regarded as a mode of torture too cruel and unnatural for civilized countries to adopt. For one long pent up on a desert island, the sight of a human footprint or a human form in the distance would be the most tumultuously exciting of experiences."¹ The hermit has always been so much the exception among men that he who avoids the crowd is looked upon with suspicion and dubbed misanthrope, even though his heart may overflow with the milk of human kindness and his good deeds be many if secret.

This instinct of attraction of like for like does not imply sociability or sympathy, though it is the basis on which both those complex emotions must be built. The masses of people that in the evening crowd certain streets in every large town are not drawn together by kindly feeling for each other: they are, indeed, a herd of strangers. Nor are they there because of a common attraction, such as rows of well-lighted shops, for they are most in evidence after the shops are closed. It is simply the same primary impulse which leads sheep to crowd together in a field. Mr. McDougall pertinently asks "What proportion of the ten thousand witnesses of a football match would stand for an hour or more in the wind and rain, if each man were isolated from the rest of the crowd and saw only the players?"²

We all know, too, the difference it makes to a body of actors whether the house be full or empty, to a

¹ James : *Principles of Psychology*, vol. ii. p. 430.

² *An Introduction to Social Psychology*, p. 86.

preacher whether a crowded congregation or an array of empty benches be before him, to a speaker whether he address a large body of his fellows or have before him two or three small boys and a dog. It is not that in the unfavourable cases there is a deliberate choice not to play or speak well. It is that in the favourable cases one's powers are really greater. And further, each of the hearers is affected in a similar way. Men appreciate best what they hear or see in company. So there is unconscious emotional interaction, and, as we say, the general atmosphere is favourable or unfavourable to an effective result.

The instincts hitherto considered are concerned with the personal life and with relations to other human beings. Those we have now to glance at are primarily operative in dealings with things rather than with people. The earliest to appear, and the most wide-reaching in its scope, is curiosity. It may be excited by anything strange in a familiar setting, and it prompts to a near and thorough examination of the novelty. Of course, the new element must not appear to threaten, or fear will be aroused. Indeed, in the behaviour of a young child in presence of an unfamiliar person or thing an alternation of curiosity and fear is often shown. Curiosity prompts approach; fear induces withdrawal: we see the child drawing near and shrinking back as the one or the other instinct comes to the front.

The essential mental attitude in curiosity is interrogation. The instinct, therefore, prompts to the activity of discovery. It is the spring of all desire to know, the origin of all science. For all science is an attempt to answer the two fundamental questions: What is it? What is its use? To foster, guide, and originate

curiosity is the essential work of teaching. Left to itself, curiosity will fritter away time and energy in dealing with the new and the trivial. As is admirably said in an article in *The Times*¹ on 'Vulgar Curiosity': "Curiosity is neither a virtue nor a vice, but one of the chief forces in human nature, to be praised or blamed entirely according to the use that is made of it. Like fire, it is a good servant but a very bad master. It is a powerful aid to wisdom in those who have a serious purpose in life; for without it they are not enriched by experience or disinterested observation. They make up their minds too quickly about everything and are apt to become fanatics. They grow mannered in their thought, as artists who do not study nature grow mannered in their execution. But curiosity is a no less powerful aid to folly in the frivolous. For in them it is wandering and uncontrolled. They rely on it to preserve them from the boredom that is always threatening them. Provided they are amused by it, they make no distinction in its object. All they ask is continually to see some new thing that will divert them, without calling upon their minds to make any effort. There is no system in their curiosity, and no connexion between their experiences. They will turn from one to another, as monkeys will turn from a nut to a piece of glass, and from a piece of glass to scratching themselves. All they ask is that the new stimulus shall be stronger than the old; and to each stimulus they present passive minds, making nothing of any experience. Thus their taste in experiences grows continually coarser, like the taste of drunkards in alcohol; and, like drunkards, they must satisfy it at all costs. Curiosity, in a mind altogether

¹Sept. 2nd, 1910.

mastered by it, is cruel as the grave, cruel without passion or pretext....

“We cannot, nowadays, look on at bodily torture ; but there is a large public that will go to any trouble to witness mental torture, and that cares nothing how much it may increase that torture by its curiosity.... Thus they are as cruel as children that pelt a frog, and for the same reason—namely, that they put their own pleasure before everything else. This kind of cruelty comes mainly from want of imagination, and it is a signal proof that curiosity does not quicken the imagination unless properly controlled and directed. Yet some degree of imagination is needed before curiosity can exist at all. The heartless curiosity of a crowd is altogether different from the heartless indifference of animals or idiots. They flock to see a murderer because murder is a crime that appals them, because they have a human interest in the extremes of human nature. But their imagination, like their curiosity, is passive, not active. It will make no effort on its own account, but can be quickened only by external excitements ; and so the noblest of human faculties is perverted into a kind of intellectual prurience more repulsive than the indifference of animals, as ‘lilies that fester smell far worse than weeds.’

“Vulgar curiosity is a besetting sin of our time, because now we hear so much about everything that happens. Where a hundred years ago people gossiped only about their own village, they can now gossip about the whole world. Village gossip may often be cruel ; but at least it is gossip about people well known to the gossipers ; and the curiosity that is satisfied by it must be to some extent humanized and controlled by sympathy

and friendliness. But, when we gossip about people whom we have never seen, it is very easy for us to forget that they are human beings and to regard them as mere spectacles for our amusement."

It is, therefore, a mistake, as serious as it is common, to believe that the only function of the educator with regard to children's curiosity is to stimulate it. The effect of the encouragement of childish curiosity without any attempt to direct and prune it is shown in the prying and impertinent questions asked by badly brought-up boys and girls who are old enough to have learnt that every personal matter is not common property. Sometimes it takes the more objectionable forms of reading private letters, of listening at doors, of peeping through keyholes. Here, as elsewhere, education has to use the innate impulse, but in using it to prune and direct it. It is an organ of intelligent knowledge which is needed, not a mere instrument of sensational entertainment.

Closely united to curiosity are surprise and wonder. The former has no characteristic emotional tone and no endurance. It is a mere shock in the presence of the unexpected. Wonder is often regarded as identical with curiosity, and the word is at times used to imply that questioning attitude which marks the full instinct. Sometimes, however, the questioning is either absent altogether or very vague and undefined, and this seems to be the mental attitude to which we most commonly apply the term 'wonder' as a noun rather than as a verb. 'I wonder how that is made' at least suggests some impulse to find out; but 'The peasants were full of wonder at the eclipse' does not imply that they sought an explanation. Wonder in this sense is content to

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accept the unknown as the inexplicable. From it is
• easily developed the emotion of awe, which arises when
the unknown and not-understood impresses by its power.
• From curiosity, on the other hand, develops admiration,
• which implies appreciation of beauty or skill. There
• is thus in admiration an intellectual element which is
• not present in awe. In other words, admiration is made
possible by enquiry, awe is content to accept without
question.

• Of course, surprise and wonder may be preliminary
• stages in the development of curiosity. The skilful
teacher often thus uses them with young children. He
introduces unexpectedly that about which he wishes
them to learn, and awakens surprise. By a question or
two he shows them that they do not understand the
matter. All that is easy. The real educative work is
in the next step—the transmutation of the static wonder
into the dynamic curiosity. When this is not done in
the case of any child the knowledge conveyed to him
belongs to him in the sense in which an adhesive stamp
belongs to the envelope to which it is affixed, not in
the sense in which the new wood belongs to the tree
which makes it.

Very early in life the baby shows an impulse to retain
things which attract him. He cries when the watch
with which he has been playing is taken from him. Of
course, he soon forgets the deprivation, as he will equally
soon ignore the restitution if the object be given back
to him. That is because his mental life is in so formless
a stage; in the ordinary sense of the word he has no
memory, but is altogether held by the present. In this
• acquisitive instinct, however, we have the root of that
• desire to obtain and to hold from which has arisen all

man's economic advance. There is no need to teach a child the idea of personal property ; education has only to guide it and to bound it by regard for the rights of others.

The most elementary mode in which personal property can be acquired is to gather what is valued wherever it may be found. This tendency is strongly shown in nearly all boys. In girls it is less frequent and less permanent. When it does appear in a girl it is often, perhaps usually, not so much due to an instinct as to imitation of her brothers. This, presumably, is the result of evolution. The man has for ages acquired the family property, while the woman has mainly been engaged in applying it to the family needs.

The collections which boys make when they are left to themselves are generally quite worthless ; for even if the objects themselves be of any value for knowledge, there is little or no attempt to use them as material to be studied. The work of education is not to discourage the instinct to collect, but to unite it with that of curiosity. Almost any collection can be made of some use in this way. Even the stamp album may suggest many questions about the peoples of other lands ; an arrangement in order of time may yield historical suggestions, a comparison of face-values may lead to enquiries as to the postal relations between different countries.

The collecting form of acquisition when dominant in adult life becomes a kind of mania. It is an abnormal and pathological continuation of a youthful form of the expression of the instinct. The blue china monomaniac, or the man who spends most of his time and substance on the acquisition of old Italian violins, is as far removed

from sane mental development as is the miser who denies himself the comforts and even the necessities of life in order to hoard money. In him the instinct of acquisition has been diverted from its end to its means; for the end is provision for self-conservation.

United with strong self-assertiveness and unchecked by altruism acquisitiveness leads to inroads on the property of others, either directly, as with the thief or the burglar, or indirectly, as with the promoter of bubble companies or the fraudulent tradesman. Combined with the primary appetite for food, with the tender and sexual emotions, and with self-assertion and pugnacity, it is evident that it spreads far into life; it enters strongly into the desire 'to found a family' and to leave one's descendants well provided with this world's goods.

Man's instinctive dealings with the world are not exhausted by the desires to know and to possess. He is further impelled to turn to use. It is evident that without this instinct civilization could never have begun. The savage scoops out a cave, then he builds a hut, he digs out a boat, he makes tools and weapons. That was the beginning. The fruition is seen in architecture, in mighty ships, in wonderful machinery. The instinct to construct has made possible a development and a satisfaction of the desire to possess which would have been otherwise impossible.

In studying the stages of the advance of constructiveness we have one of the most easily followed charts of the way in which an instinctive mode of activity is modified and extended by the growth of intelligence. We see further that the growth of knowledge has been made possible only by the advance of constructive ability. What is the scientific investigator without his instru-

ments? Slow and halting was the advance of knowledge before man's powers of intelligence were applied to the construction of telescopes, microscopes, and balances.

It would seem, then, that the instinct of construction is of the very first importance in the life of man ; that without it man could have advanced but a very little way in knowledge or in wealth. How strange a commentary on this truth—proved abundantly not only by psychology but by history—is the traditional practice of schools. They appeal simply to mental activity, ignoring the child's instinct to deal actively and constructively with things and in so dealing to satisfy and excite his curiosity at one and the same time. This has for centuries been the common scholastic practice, and because of it most of the real education of man has been attained outside the schools. When boys after leaving school went, as a rule, to learn some more or less skilled handicraft, and girls were trained in household work by their mothers, the constructive instinct was not without an educative outlet. Now, when so many lads become errand boys and girls learn to despise housewifery, this provision for the activity of the instinct is withdrawn from many, especially of those who live in towns. The country child is called on out of school to do many things about farm or garden which bring the instinct into play, and if he remain in the country after his school days are ended he is much more likely to learn some real constructive work than is the town boy. During school-days the latter roams the streets when not in school ; after school-days he too often drifts by insensible degrees towards the unemployable. The application of psychology could not take a more fruitful form than the recognition in practice that intellectual activity divorced

from physical dealing with things loses half its strength and more than half its utility.

All the above innate impulses seem to be certainly instincts, as each of them fulfils the conditions of showing a definite emotional state as its nucleus and of having specific, though in some cases wide, modes of excitement and of expression. Other innate tendencies which are sometimes classed as instincts are wanting in this specific quality. Such are play, imitation, and sympathy. So, too, joy and sadness are not specific emotions, but are rather qualities which attach to any and every emotion. There may be a sad curiosity, as when one asks about the death of a friend, or a joyful curiosity, as when one enquires into the particulars of some unexpected good fortune. A youth in love is sad or gay according to the demeanour of the fair one. Certainly, few people can easily imagine a joyous hunger, yet, I suppose, such a condition would not be strange to many a fasting ascetic. A kind of delicious fear is also by no means an unknown state of feeling, as when one reads or hears a thrilling story

“of most disastrous chances,
Of moving accidents by flood and field,
Of hair-breadth 'scapes i' the imminent deadly breach,
Of being taken by the insolent foe,
And sold to slavery.”¹

In discussing instincts, then, we have not exhausted inborn tendencies, but only those of which the special character indicates physiologically a predisposition to a specific nerve-circuit, and psychologically a tendency to meet certain kinds of situations in certain broadly definite ways.

¹ *Othello*, act i. sc. 3.

CHAPTER V

VARIATIONS IN MENTAL ENDOWMENT

THAT all the instincts and general tendencies discussed in the last chapter are common to normal men is in no way inconsistent with the patent fact that mankind presents much diversity. Indeed, the explanation of natural endowment by heredity accounts for such differences. For an individual inherits his qualities from the whole line of his ancestry. Only brothers and sisters have the same ancestral line, and in each case this is crossed with another line for their children. Nor does heredity mean that a child reproduces one of its parents, or presents a combination of both. It may show some qualities of one remote ancestor, some of another, always in a fresh combination. The transmission of qualities and propensities should be thought rather under the figure of continually new chemical combinations than under that of a series of mechanical mixtures in which units of endowment are united into various totalities. Hence, we may be confident that no two persons will be exactly alike.

On the other hand, it follows that people descended from ancestries that have much in common will exhibit certain general characteristics. Here we have the explanation of the marked distinctions between races and nations. A people living in a limited area, intermarry-

ing much among themselves and little with the outside world, would of necessity find a good deal in common if the ancestral trees of all its members could be traced back for several centuries. Take the case of our own country. For eight and a half centuries England has suffered no foreign invasion, and peaceful foreign immigrations have been few and local. The present population, then, must be descended from ancestors whose number would form but a very small percentage of its own. The smallness of this number cannot be estimated from the totality of population at any former period, for from that would have to be deducted all those whose lines of descent have died out. Although, then, it is not possible to draw out such a plan of the ancestry of any Englishman of to-day as would trace back his descent in every possible ramification, yet it is obvious that such a scheme would meet and intermingle with those of other Englishmen in an indefinitely large number of points.

We may go further and explain in the same way the general resemblances which mark the inhabitants of one part of the country and separate them from those of another—the men of Yorkshire from those of Devon. Till recent years interchange of inhabitants between different parts of the country was rare, and still is comparatively infrequent in rural districts. So, while the inhabitants of our great towns, drawn as they are from all quarters, show many common characteristics and continually fewer peculiarities, the peasantry still offer examples of the old local colour.

Further, during centuries a nation lives under the same human conditions. Each generation enters into the whole systems of ideas, beliefs, interests, and sentiments, accepts them, and passes them on. Thus in course

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of time is built up the soul or mind of the nation, as distinct from the minds of its individual citizens—that national way of viewing life, which more or less orients each individual outlook. Here, then, is another way in which heredity works. Each individual inherits not only his personal qualities and impulses but the spiritual air in which they will be exercised, the intellectual and moral nutriment they will receive, the ideas with which they will be clothed.

How great in fact is the conjoint result of these interacting forces is seen at once when we call to mind the very essential and fundamental differences between the Eastern and the Western worlds. We are friendly allies of the Japanese, but anyone who has studied Bushido must realize—without at all prejudicing the question of better or worse—how different are the Japanese conceptions of life and of duty from our own.

When we come nearer home we recognize that each nation of Western Europe has specific characteristics, each lives its life in a different spirit. This determines the genius of the national languages, and explains how it is that a translation can never give the essence of literature which expresses not facts but aspirations, not reasonings but ideals and longings. Not the speech of the mouth only but the very hopes of the heart are different by just those impalpable shades which refuse to be conveyed in any idiom but their own.

How far national mental and moral tendencies, as distinguished from the forms in which they find expression, are transmitted by heredity, and how far they are simply absorbed afresh by each new generation, is a matter of doubt and dispute. Dr. Archdall Reid says: "If the child of refined and educated English parents

were reared from birth by African cannibals, then in body, when grown, he would resemble his progenitors more than his trainers. Does anyone believe that the same would be true of his mind? . . . The English child we imagined as reared by African savages would certainly display no hint of the language and general knowledge of his parents, no tincture of their moral, social, religious, and political ideals and aspirations. He would ruthlessly murder and enjoyingly eat the stranger. He would harry the stranger's property and annex the stranger's wives by the wool of their heads whenever practical. He would treat his own wives as beasts of burden, and perhaps thrash them as a matter of routine. His aesthetic ideals would be satisfied by a little paint, some beads, and plenty of grease; his moral ideas by a homicidal devotion to the tribal chief. His god would be the tribal fetish, to whom he would offer human sacrifices. He would go naked and unashamed."¹ This may largely be granted, for it specifies modes and fashions of outward conduct. There can be no doubt that the hypothetical individual would be a savage, with savage ideas and customs. Yet the question seems to remain whether there would be no difference between him and the other savages, whether he would not be an English savage after all. Would he, for example, be more easily and thoroughly converted from his savagery than his companions who were descended from generations of savage ancestry? I do not pretend to answer the question, and yet it seems that by analogy such an expectation would not be in any way absurd. A French child, born and brought up in England does not become an English child. It indeed speaks English, and may

¹ *The Laws of Heredity*, p. 420.

be English in all that it has received from without. But it has received all in a French mind, and there remains a subtle differentiating shade which we recognize as the French spirit. An intensely interesting field of enquiry is here open to competent observers. Moreover it is a most important field ; for no adequate understanding of the individual is possible unless his development can be examined in both its factors—the inherited nature and the inherited society with all its traditions, its views of life, its aspirations. It is, however, a region into which very few such enquirers have as yet ventured.

Even were I able, it would not be necessary to try to set forth the mental qualities even of the chief nations of Western Europe. Our aim is to gain such an understanding of English children as will enable us to educate them as well as in us lies. This purpose is here met if we have some working knowledge of the general mental characteristics of Englishmen ; that is, of the general mind which is so potent in moulding each individual mind.

Burns' aspiration was

“ Oh wad some power the giftie gie us
To see oursels as ithers see us ! ”

We can have that advantage, for that pioneer of social psychology, Dr. Gustave Le Bon, has given a sketch of what appear to him to be our national characteristics. He says : “ The dominant notes of this mental constitution from the point of view of character are : a mass of will which very few peoples, save perhaps the ancient Romans, have possessed, an indomitable energy, a very strong initiative, an absolute self-mastery, a sentiment of independence pushed even to the verge of excessive unsociability, a forceful activity, very active religious

feelings, a very stable morality, a very precise idea of duty.

"From the intellectual point of view, no special characteristics can be given, no peculiar elements indicated which cannot be found in other civilized peoples. One can scarcely note more than a sound judgement which seizes on the practical and positive side of things and does not lose itself in chimerical researches, a very lively interest in facts and but a moderate taste for general ideas, a certain narrowness of mind which makes it difficult to see the weak sides of religious beliefs, and so removes those beliefs beyond the range of discussion.

"To these general characteristics must be added that complete optimism of the man whose path in life is clear, and who never imagines he could choose a better, who always knows what his country, his family, and his gods expect of him. This optimism is pushed to the point of regarding as well worthy of contempt all that is foreign.... This contempt for the foreigner is doubtless, from a philosophical point of view, a sentiment of a very low order: but from the point of view of the prosperity of a people it is of the greatest value....

"All the qualities which have just been enumerated are found in the most diverse social classes; no element of the English civilization can be discovered on which their solid impress has not been stamped."¹

Perhaps we may add to this, as one of the elements of national character of which we are most proud, that love of 'fair play' which we like to think flourishes among us more strongly than elsewhere—an idea which certainly derives some support from the fact that no other language has an exactly equivalent term.

¹ *Lois psychologiques de l'évolution des peuples*, pp. 107-109.

The educational bearings are two-fold. In the first place, having decided how far this picture of ourselves is a true one, we are at least conscious of the points of national character all would wish to see strengthened, and of those which it would be well to try to soften. In the second place, the recognition that other peoples have equally well-marked national characteristics should make plain to us the futility of trying to transplant in their entirety foreign educational ideas and methods to our own land. We may get suggestions from Germany or from France, but the application must be determined by our own national needs and our own national character. "The education of one people evidently cannot be adapted in all its details to another, but one may always learn much by studying those details."¹

The distinctions of race are generic. We know that within them there is infinite individual variety. "Not only one man is unlike another, but *every* man is essentially different from *every* other, so that no training, no forming, nor informing, will ever make two persons alike in thought or in power."²

No one, probably, is less liable than a teacher to be led away by sentiment to accept that most fantastic of all the eighteenth century philosophical fables—that all men are equal. He has constant experience that the children before him are unequal in all bodily and mental qualities, and that as they grow older these inequalities, far from disappearing, accentuate themselves. But personal differences cannot be separated from life. The boy who is healthy and able, of strong will and of persevering character, earns more of the good things of the

¹ Le Bon : *Psychologie de l'éducation*, pp. 116-117.

² Ruskin : *Stones of Venice*, vol. iii. ap. 7.

school than does his weaker school-fellow. The same qualities will mean greater success for him in the world. While the weak and vacillating man is waiting for "something to turn up", the strong man bends the present to his will, and presses forward to his object. As Bacon said, "A wise man will make more opportunities than he finds." So nothing can make men equal either in their nature or in their opportunities; for what is opportunity to one is impassable barrier to another. Nor can the output of their lives be equalized except through the suppression of all those activities which do the most for the world's welfare.

It is no more true of individuals than of nations that the differences simply result from surroundings. We do not grow up alike because we are not born alike. No one would deny this with respect to the body, and the more complete becomes our knowledge the more it is established that bodily functional differences imply mental differences. That one boy becomes strong and active while his brother grows up weak and sluggish is not attributed to differences of physical care. Yet nothing is more common than the doctrine that what a child becomes mentally and morally depends entirely on the training he receives. That is as false as would be a similar statement about the body. Children come into the world with some tendencies much stronger than others; with some, perhaps, unduly weak. In extreme cases the weakness is so marked that for practical purposes the tendency scarcely exists. Thus we have hereditary geniuses and hereditary fools; hereditary criminals as well as hereditary saints, and perhaps in greater numbers. "Moral insensibility is usually innate,

and coincident with other symptoms of degeneracy. Among several children of the same family, brought up in the same surroundings, having received the same care, a single one may differ from all the rest, be amenable neither to gentleness nor to force, and manifest a precocious depravity, which will only strengthen as he grows older.”¹

Certainly, as we said, it is impossible to set out such a chart of the ancestry of any one as would account for all his personal characteristics. Nor is it claimed that one can lay all one's sins and shortcomings on one's forefathers. Surroundings do count for much, and they can and do modify in many ways the inborn nature. Yet the modification is in detail rather than in essence. As Ruskin eloquently says: “The greatness or smallness of a man is, in the most conclusive sense, determined for him at his birth, as strictly as it is determined for a fruit whether it is to be a currant or an apricot. Education, favourable circumstances, resolution, and industry can do much; in a certain sense they do *everything*; that is to say, they determine whether the poor apricot shall fall in the form of a green bead, blighted by the east wind, and be trodden under foot, or whether it shall expand into tender pride, and sweet brightness of golden velvet. But apricot out of currant,—great man out of small,—did never yet art or effort make; and, in a general way, men have their excellence nearly fixed for them when they are born; a little cramped and frost-bitten on one side, a little sun-burnt and fortune-spotted on the other, they reach, between good and evil chances, such size and taste as generally belong to men of their calibre, and, the small in their serviceable bunches, the

¹ Ribot: *Psychology of the Emotions*, Eng. trans. p. 302.

great in their golden isolation, have, these no cause for regret, nor those for disdain.”¹

Zoologists and botanists, however, find it possible to establish intermediate classes between the individual and the wide genus of which it is a member. If this can be done, even roughly, with human beings, it will tend to give a similar clearness to our thoughts and a similar guidance to our observations of children as the doctrine of species gives in the study of animals and plants.

I suppose we all do roughly classify people round a few more or less explicit types. “We pass instantaneous judgements on strangers every day. Here’s a gull, and here a fox, here a sulky brute, and here a right good fellow; here a man with a will of his own, and here a man without one. . . . Women whose faces are an index of meanness, weakness, vanity, spite; women whose faces tell you at a glance that they have spent their lives in the love of home and children.”² The teacher sorts his pupils in his own mind according to their mental qualities. These are the ‘good’ boys in a class, those the ‘average’, and those others the ‘dullards’. Often, as I have already hinted, the judgement is fallacious, for the test of school lessons is too narrow and too arbitrary. Nor is such a classification—even were it true in every detail—of real practical help outside the school walls. It is to be hoped that the scholars will find something better to do in after life than to learn lessons, and it is safe to prophesy that if they do not they will discard the lessons all the same.

¹ *Modern Painters*, vol. iii. p. 47.

² D. Christie Murray : *The Brangwyn Mystery*, ch. 17.

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Education should, at least, find out broadly what each child is fit for, so that some, at least, of the deplorable waste of ability due to putting boys to callings for which they have no aptitude may be avoided. At present a boy's career is often determined by the kind of opening which chances to present itself, entirely regardless of its possibilities, and with no question as to its relation to the boy's powers. When not pressed to an extreme point there is truth in M. Binet's contention: "I believe that the determination of children's aptitudes is the most important business of instruction and of education; according to their aptitudes they should both be taught and be directed towards an occupation."¹ Any such determination must result from the careful and systematic study of individuals; to this the first step is the consideration of leading characteristics, and this resolves itself into a grouping round types.

Such a classification was attempted by Galen nearly two thousand years ago, and was based on current physiological theories. He assumed that four humours were present in different proportions in each person, and that they gave a certain colour and form to the mental constitution. Thus there were four temperaments. When the blood was dominant there resulted the sanguine temperament, marked by brightness, optimism and instability. Did the gall—or black bile—rule, the result was the melancholic temperament, with the qualities of depression, proneness to brooding, suspicion, irritability, and obstinacy. When the bile was the most powerful the temperament was choleric, and the individual showed energy, impatience of opposition, and strong will power. Lastly, if the lymph was the determining humour the

¹ *Les Idées modernes sur les enfants*, p. 11.

lymphatic or phlegmatic temperament, with its characteristics of tranquillity, lassitude, and inertia, appeared.

The physiological basis has long been abandoned, but the distinctions drawn—which indeed were based on observation of well marked modes of behaviour—have remained, and the names of the temperaments have passed as descriptive terms into common speech.

It may be noted, however, not only that the classification refers to adults, but that the normal person passes to some extent through all the temperaments in turn. The child is naturally sanguine, the youth melancholic in so far as he is inclined to introspection and emotionalism, the mature man energetic or choleric, and the old man who has lost the fire of youth shows the leading qualities of the phlegmatic temperament. Such an evolution was, indeed, traced by Aristotle long before Galen set forth his doctrine of temperaments. The same idea is involved in Shakespeare's well known *Seven Ages of Man*.¹ Omitting

“the infant,
Mewling and puking in the nurse's arms,”

and the two last stages, which are those of incipient and developed senile decay, we have

“the whining school-boy, with his satchel
And shining morning face, creeping like snail
Unwillingly to school,”

a picture which, indeed, does not flatter the Elizabethan school, but which shows the cheerfulness and suggests the versatility of the boy.

¹ *As you like it*, act ii. sc. 7.

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Then we have the stage of strong emotion in

“the lover,
Sighing like furnace, with a woeful ballad
Made to his mistress' eyebrow.”

In early manhood there is overflowing energy in the

“soldier,
Full of strange oaths, and bearded like the pard,
Jealous in honour, sudden and quick in quarrel,
Seeking the bubble reputation
Even in the cannon's mouth.”

Then comes the age of sage counsel pictured in

“the justice,
In fair round belly with good capon lined,
With eyes severe and beard of formal cut,
Full of wise saws and modern instances.”

Nevertheless, throughout each life this sequence is shown in ways characteristic of one or other temperament. The difference of nature is innate, and can be traced underlying the variations due to age. Some people retain throughout life the vivacity and inconsequence of childhood; some children show much of the sedateness of maturity. These are the more extreme cases, but such differences are always apparent in some degree. As we pass through life we show in turn some of the characteristics of each temperament, but always in terms of that temperament in which our nature is moulded.

When we seek to base a classification of temperaments on modern physiological knowledge we are met by difficulties at present unconquered. That differences in temperament depend on differences in bodily organization may be taken as established, but what exactly

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those differences are is an extremely difficult and obscure question: various hypotheses have been suggested, but all have been met by serious objections. We are, therefore, driven back on empirical observation and generalization. Here the divisions of the traditional scheme will serve as a basis, though we shall not adhere closely to them. The traditional temperaments do distinguish the modes in which various people meet the calls of life. The sanguine or volatile react rapidly but without any continuing force, the phlegmatic slowly and feebly, the choleric rapidly and strongly, the melancholic slowly and strongly. The beginnings of such differences are seen among children at quite an early age, and they become accentuated as life advances.

We all know the child of quick apprehension but feeble retentiveness, him who is forward to perform immediate service but who soon tires, him of quick but shallow sympathies. In a word, the sanguine person is responsive and fickle. There must be a good deal of this in every child just because everything is so new to him, and experience has not taught him which things are of most worth. But in an adult the predominance of these characteristics is a sign of some arrest of mental development, whether it be due to innate defect or to defective training or to both. The mind is a childish mind, no matter what the age may be.

Quick and strong reaction implies that the individual is always ready to be up and doing—to meet the situations of life with energy. To see an evil is to long to do something to remedy it. The impulse to act is strong enough to induce action without much previous time given to deciding whether to act or not. This is the basis of the practical man. He must act, but mere action

does not satisfy him. He requires further that it be successful action.

Of course, this active nature may be united with all degrees of intelligence, as well as with considerable strength of the more outward-looking emotions. The instinct of pugnacity is strongly developed in it; and, as we have seen, this instinct is often found in close relation with those of altruism and love. But the intelligence is dominated by the practical outlook. Thought for its own sake no more appeals than does emotional dreaming. The essential characteristic is that the man or boy wants to be up and doing. These are the boys who delight in all forms of bodily skill, whether in games or in manual work. In school lessons they often do not delight, just because the fundamental spring of their natures finds little in those lessons to which it can respond.

The practical temperament, then, is marked not only by the predominance of will but also by the direction of will. There is concentration of energy in great strength, but it is centred on some practical result, not on the solution of a theoretical problem. In pursuit of its purpose it may become hard and callous. When the altruistic emotions are not operative and the instinct of self-assertion is united with that of pugnacity, the practical person is apt to press forward to his own ends, trampling down on his way the feelings and the rights of others.

Further, when this strong and practical temperament is of only low intelligence the will often shows as obstinacy. A path once entered on is pursued just because it has been entered on, even though experience shows it to be an unwise one. Here, it is evident, self-

assertion dominates pugnacity. Obstacles are attacked, not because they are in the way of the external purpose, but because they are in the way of the will.

A similar obstinacy is often shown without any marked strength of purpose, especially by children who in their earliest years have not been subjected to a judicious discipline. The attainment of anything on which such a child sets its capricious desires is to him a personal matter, in the sense that a feeling of deliberate and intentional personal injury arises if the attainment be hindered by the act of another. Here again is apparent an undesirable strength in the instinct of self-assertion.

When this kind of self-will appears in the sanguine or volatile child it can usually be much modified by a kindly but firm discipline. But when it is united with strength and persistence the product is the sullen child whom it is impossible to drive and very difficult to lead. The natural defect is primarily emotional but often secondarily intellectual. The line of treatment is thus indicated, though the carrying it out in any case is not likely to be at all easy.

The 'contrary' boy is a rather extreme, but by no means very uncommon, type of the self-willed. He is one of those people whom nature seems to have designed to be in permanent opposition. There may be considerable intelligence, though it is generally of a narrow type. But the peculiarity is that the line taken by such a person is largely determined by his surroundings, though determined negatively. The surest way to secure that he does something is to command him not to do it. Great care is obviously needed in dealing with such natures to suggest rather than to command whenever it is possible, and when it is not to see that the

command be reasonable and be made as little private in its application as possible. For, it may be noted, certain people have a way of issuing commands, and even of giving advice, that would induce a worm to turn. If a parent or a teacher finds that his suggestions to children generally produce opposition, he had better seek "the fountain and origin of the evil" in himself.

The traditional school provides little opportunity for the essentially practical child to show what is in him. If he be intelligent as well as practical he does pretty well at lessons, and is probably sent when school is over to some sedentary occupation which suits him not at all, and which really mars his life. If he be only practical—clever only with his hands—he is condemned as a dunce. Yet there may be in him the potentiality of a fine craftsman. For there is no real test in school lessons as to whether the practical child's apparent want of intelligence is a real deficiency, or only a limitation of range. He may be dull at lessons and yet capable of a very high order of intelligence in practical work.

Is there not a call that schools of all grades should make adequate provision for the practical natures among their scholars? Not on the ground that they are inferior to those who learn the traditional lessons more readily, but on the ground that they are different. Have they not a right to the training that will develop their capacities, and is it not a waste in every sense of the word to insist on confining them to one which does not, and cannot, make the most and the best of their powers? It surely would be possible in most places, and easy in large towns, to have either special 'sides' for all children above eleven or twelve years of age, or special schools in which the practical children, while not neglecting

studies which call forth the emotions and the imagination, should yet spend a large proportion of their time in various forms of practical pursuits, and should do their thinking with their hands as well as with their heads.

When the response to impressions is slow and yet strong there is implied a considerable amount of internal elaboration, which may, indeed, be itself the chief element in the reaction. This may be either emotional or intellectual. In the former case we have a temperament which may be styled emotional or sensitive, in the latter one which is appropriately named contemplative.

When impulses from without do not lead to definite activity, but spend themselves in the inner life itself, we have the nature which lives essentially in its emotions. This mental type is usually conjoined with a highly strung nervous system, so that it is generally spoken of by doctors as the nervous temperament. It would seem probable that the sensory excitations discharge into those parts of the brain-cortex which are closely connected with the organic life of the body rather than with the motor areas.

It is evident that such a life as this is more moulded by its surroundings than is the practical nature. It may, indeed, show bursts of energy, but they seldom last long. The key-note of the temperament is that perseverance—which means disregard of present impressions—is wanting. The emotional person is easily roused to fury, and in the first impulse of that passion may take up some course of action with great vigour, but it soon dies down. The emotions are sincere enough, but they do not find their true outlet in action.

The operations of intelligence in an emotional temperament are given a certain form by the prevailing caste

of mind. Things and persons are esteemed chiefly according to their value for the feelings. This is apt to affect the view as to their worth as elements of knowledge. We all know how facts are distorted by the prejudices and preferences of even the most level-headed. Much more is it so when feeling is the very core of life.

When the intelligence is great and original in type this working within the realm of feeling gives the artistic temperament. The artist or the poet sees things differently from other men because, though he also looks at them from a practical or a theoretical standpoint, yet he sees into their relations to the innermost sanctuary of the heart. So he often reveals to us what otherwise we should never see.

“For, don’t you mark ? we’re made so that we love
First when we see them painted, things we have passed
Perhaps a hundred times nor cared to see ;
And so they are better, painted—better to us,
Which is the same thing. Art was given for that ;
God uses us to help each other so,
Lending our minds out.”¹

When the intelligence is small, either absolutely or relatively to the strength of the emotional tendency, we have sentimentalism, which is near or over the verge which separates the healthy from the pathological in mental life. Then we have dreamy sentiment and morbid self-consciousness—a brooding over imaginary joys and sorrows, a heart which feeds on itself, and is so satisfied with unrealities that life becomes a mere world of shadows. In the sphere of conduct this shows itself in a weak power of self-control, in a constant yielding to the solicitations of the moment.

¹ Browning : *Fra Lippo Lippi*.

It is evident that in trying to prune the excrescences and exuberances of an emotional temperament great care is needed lest the delicate bloom of fancy and the fine flower of sensitive feeling be also lopped off. It is not the depth and delicacy of feeling that education should seek to lessen. On the contrary, it should aim at making these more real by bringing them into actual and close contact with the joys and sorrows of life. Encouragement of action so as to avoid unhealthy introspection and dreaming is the true path. Especially needful is this in the years of adolescence when the emotional nature is generally more insistent than at other periods.

As it seems advisable that the practical natures should receive a good deal of their training through their practical activities, so the children who show signs of artistic or literary talent should be given abundant means and opportunities for its development.

When the response to suggestions from without takes the general form of intellectual enquiry we have the contemplative nature. There is no lack of activity, but it is mental rather than bodily. The feelings and emotions are calm, but they may be intense; they do not easily interrupt the train of thought, but they may determine its course.

The cold intellectual person is certainly somewhat unattractive in youth or in age, yet he may do much for the world by enriching it with thoughts of the utmost value. He is better for the community in general and for posterity than for those of his contemporaries who have to live with him. But though the contemplative temperament is never gushing it is quite compatible with warmth of heart and a genuine regard for others—a

regard, moreover, which is likely to live on unchanged through all the vicissitudes of intercourse, for it is founded on the rock of conviction of worth not on the shifting sand of transitory feeling.

The thoughtful child is apt to reply to questions and to arrive at conclusions much less quickly than his sanguine companion, but his results are generally sounder, and are based on reasons satisfactory and clear to his own mind: they are not mere guesses at truth or hasty intuitions. So when a child of this temperament gives a mistaken explanation or reaches an invalid conclusion, it is always worth the teacher's while to trace back the train of thought till the initial error is laid bare. But the unconsidered answers of the quick and superficial child of sanguine temperament seldom repay investigation. This was excellently put by Roger Ascham—an illustration, by the way, that the application of real practical psychology to education is not so modern as many worthy people believe. He wrote: "Quicke wittes commonlie be apte to take, unapte to keepe: soone hote and desirous of this and that: as colde and sone wery of the same againe: more quicke to enter spedelie, than hable to pearse farre: even like over sharpe tooles, whose edges be verie soone turned. Soch wittes delite them selves in easie and pleasant studies, and never passe farre forward in hie and hard sciences.... Also, for maners and life, quicke wittes commonlie be, in desire, new-fangle, in purpose, unconstant, light to promise any thing, readie to forget every thing: both benefite and injurie: and thereby neither fast to frend, nor fearefull to foe: inquisitive of every trifle, not secret in greatest affaires: bolde, with any person: busie, in every matter: sothing, soch as be present: nipping any that is

absent : of nature also, alwaies, flattering their betters, envying their equals, despising their inferiors : and, by quicknes of witte, verie quicke and readie, to like none so well as them selves. . . . They be like trees, that shewe forth faire blossoms and broad leaves in spring time, but bring out small and not long lasting fruite in harvest time : and that onelie soch, as fall, and rotte, before they be ripe, and so, never, or seldome, cum to any good at all.”¹

The child who at first view appears by his brightness and quickness in response the most intelligent is on further acquaintance more likely to show the inconstant sanguine temperament which Ascham so scathingly described than to be really thoughtful and intellectually capable. But not always. The distribution of marks is not always slow and deep against quick and shallow. There are intellects, and those of the very first order, which are both quick and deep. These are the penetrating minds that see at once into the hearts of things. True, they are rare; but one would be mistaken who should suppose that by measuring the time two children take to reach a result he has an inverse measure of the solidity of their intellects. The slow and shallow child is not unknown—nor is the slow and shallow man. “Still waters run deep”, but a very shallow pool may also be still.

Extreme cases of mental incapacity are recognized as abnormal and are provided for in special schools. Ought not suitable provision to be made also for those who are abnormal in the other direction—those children of exceptional ability who now gain so little from our schools? True, they are at the head of their forms, but they are

¹ *The Scholemaster.*

there without serious effort. Thus the school does not call forth their capacity. Nor is the plan of promoting them more rapidly than usual satisfactory, any more than the analogous plan of slower promotion would meet the case of the abnormally dull. They need a mental diet which would cause chronic mental dyspepsia in their class-mates. Without this they not only do not gain the knowledge they should, but, what is of infinitely more importance, they are learning the worst of all lessons—that real work is not needful. So they are trained to become vain and idle. Thus it may very well be that the school spoils its best material, and yet rests satisfied because the very material it is spoiling makes at present its fairest show. The idea of the provision in all our large towns of special schools for the specially gifted as well as for the specially deficient is worthy of consideration. It seems deplorable that while money and care are lavished on those who can never do much in the world, nothing more is done for those who are capable of the highest and best service than is done for the ordinary capacities which will always do hodman's work. No one, of course, can suppose that our present system of promotion to secondary schools at all meets the case: the standard of ability for admission is far too low. Indeed, it is true to say that, speaking generally, the average capacity in a school is not a function of its rank. It is interesting to note that M. Binet in his recent work *Les Idées modernes sur les enfants* advocates such provision. As he pertinently says, "A child of superior intelligence is a force which should not be wasted."¹

We now turn to consider the saddest and most hopeless cases with which the educator has to deal—the

¹p. 109.

apathetic. The old classification included under the 'phlegmatic' both this and the contemplative nature. Yet there is a great inner difference between them, though outwardly they may agree in showing a certain bodily inertia. With the intellectual person that inertia co-exists with a very intense vitality of thought. But the apathetic child shows a general sluggishness of mind. Frequently this is conjoined with a general lowness of physical tone. There is a want of vital vigour, expressing itself in both mental and bodily inertia. Here we have not a normal nature at all, but one defective in life. Sometimes the weakness is innate ; then in the strict sense of the words we have the apathetic temperament. More often the temperament is less the original nature than that 'second nature' which comes from constant habit. It is due to unfavourable conditions of life and is modified when those conditions are changed, though it is plain that the longer the change is delayed the less modification in the child's nature will follow.

This is all plain sailing. But we hear of apathetic children whose bodily health and strength leave nothing to be desired. That some children in vigorous health are apathetic over their school lessons is certain, and it may be suspected that this is what is meant. One wants to know whether the same apathy is shown outside school. If not there is clear proof that the school is doing that particular child little or no good. For a child profits by his school work just in proportion as it calls out some form of energy. But if the apathy extend both to games and to other forms of outdoor pursuits as well as to lessons, then it is surely time to consult a medical man. Muscles and flesh may look robust to the unskilled observer, and yet there may be organic defect.

To healthy children activity is natural. Even the contemplative child should love to play as well as to think. "In the early period of life...to suspend the mental cheerfulness, for any length of time, is as difficult as to keep fixed, for any length of time, those muscles to which exercise is almost a species of repose, and repose itself fatigue."¹

It is evident that such a survey of types as we have just made is of worth only as suggestive. Nor is temperament in one sense unalterable. It is probably true that the form cannot be changed: that both the absolute and the relative strength of will, emotion, and thought, are immutable. But the direction and the nourishment of the inborn nature are given from without. It is here that the power of the school for good or for evil comes in. Temperament is the basis of character, but on that basis many a superstructure may be raised. Temperament also fixes the limit of possible development for the individual; but education is responsible for his reaching that limit, or at least drawing near to it.

In considering temperaments we are occupied with the relative strengths of the fundamental factors of mental life. But will, feeling, and thought vary not only in their absolute and relative strengths but also in their mode of dealing with the things of life. It may, then, be profitable to note some of the most important formal marks of activity under each head. We will give the characteristics in pairs, but it must be clearly understood that the first member of any pair can be joined with the second member of any other pair which is not incompatible with it; that any number of the qualities under each head may be conjoined, and that in any strength;

¹ Brown: *Philosophy of the Human Mind*, Lect. 52.

and that similar combinations of qualities under the separate heads are to be found. Indeed, every permutation and combination of the qualities given which is not self-contradictory is not only possible but actual.

Under will we may enquire whether the child is docile or stubborn, active or inert, persevering or unstable ; or, combining these three pairs in one, industrious or idle ; lastly whether he is directive or executive, that is, whether his energy sets its own ends or accepts the ends set by others. When origination is combined with industry we have the finest type of the practical will.

Under feeling it may be asked whether the individual has sympathy and kindness or is selfish and self-centred, whether his feelings are easily raised or are dull and stagnant, whether he meets situations boldly or is kept back by timidity, whether his temper is equable or irascible and variable, perhaps even violent, whether he is generally cheerful or sullen, whether he is idealistic or materialistic in choice of objects on which to lavish his affections.

Under intellect the most pertinent questions seem to be whether the intelligence is deep and thoughtful or shallow and superficial, whether it is quick or slow, whether it is retentive or elusive. Again combining these three pairs we get on the one hand the person of superior mental ability and on the other the stupid person. Lastly, in harmony with the last pair under each of the other heads, we have the distinction between the inventive and originative intellect and that which is merely receptive, interpretative, and reproductive.

Temperament refers to the mode in which the individual reacts on his surroundings. From this must be distinguished disposition, which is the general product

of his emotional tendencies. Thus we speak of a cheerful or a gloomy disposition, but not of a cheerful or a gloomy temperament ; of an active or emotional temperament, but not of an active or emotional disposition. Disposition is the resultant of the composition of instincts regarded as modes of feeling : temperament the resultant of them regarded as types of reaction.

Disposition does much to shape life. Whether a person has a kindly or a morose disposition, whether he views events and people through smoked glasses, through rose-coloured spectacles, or in the clear light of reality, not only affects his inner life, but does much to decide the form and the amount of his activity, both mental and physical. Our feelings cannot be separated from our thoughts and our actions. So, throughout life disposition as well as temperament is operative. Nor can innate disposition be absolutely changed, though doubtless it can be modified by the firm exercise of the personal will. We can inhibit the impulses in which one emotion manifests itself and give free play to those which spring from an emotion of opposite character. Whatever is refused expression becomes atrophied ; whatever is encouraged increases in strength. Thus a great change can, by perseverance, be wrought in our outward behaviour, and, through that, a less though very real change in the inner disposition itself. But the natural pessimist never becomes a real optimist, nor can continuous disappointment destroy the buoyant disposition of the born optimist.

Underlying differences of temperament and disposition is the yet more fundamental distinction of sex. It is not so much that the various temperaments and dispositions are found in different proportions in the two

' sexes, as that the same temperament or disposition shows
 , important variations in men and women. Tempera-
 ment and disposition are imbedded in sex and developed
 in sex.

The profound physiological differences which distin-
 guish the sexes are the correlates of equally important
 mental differences. Nor is the one unlikeness any more
 than the other merely the result of unlike training and
 , education. The functions of men and women in the
 , world are, and always have been, essentially distinct.
 Now, the whole course of evolution makes clear that
 progress involves increasing differentiation of function,
 and consequent increasing divergencies of organization.
 So that the higher the level reached, either by indi-
 viduals or by societies, the more strongly marked become
 , essential differences. Neither the obscuring nor the
 , attrition of differences due to sex can, then, be expected,
 , unless the future retrograde from civilization towards
 , savagery. Among savages the distinctions are less
 , marked than among peoples which have advanced far on
 , the road of civilization, and among the lower animals
 , they are still less emphatic. It is not the identification
 of sex qualities to which evolution points the way, but to
 their more perfect mutual adaptation. Equality in
 , value of complementary functions, not the obscuring of
 , differences already established, is what the whole course
 , of man's evolution leads us to expect.

Speaking generally, woman's outlook on the world is
 more determined by feeling than is that of man. She
 , approximates the emotional temperament even when she
 does not show it in all its fullness. It follows that she
 regards things and events as wholes which have a value
 for feeling. She is more sensitive to their beauty and to

their harmony with their surroundings than is man. On the other hand, she does not care for abstract thought. It is not that she does not generalize, but that she generalizes without preparatory analysis, and, consequently, often wildly. This dislike for the exact logical analysis by which man reaches science is one of the most characteristic intellectual differences between the sexes. Even so able a woman as Mme. de Sévigné acknowledged that "abstract reasonings were repugnant to her."¹ Here is the root of the difference between the reasoning of man and of woman. Man analyses and applies principles deductively ; woman takes the special case and its value for feeling. (Hence she is less judicial than man in the sense of a rigid application of law. Yet she may reach substantial justice when man fails to do so, for general principles can never exhaust a concrete case. So, man's justice often seems unjust to woman, and woman's justice appears to man as mere caprice, because he cannot reduce it to rule.)

These intellectual differences between the sexes have been well and picturesquely put by the late Mr. F. Marion Crawford: "There must be some original reason why all boys call girls silly, and all girls think boys stupid. It must be part of the first manifestation of that enormous difference which exists between the point of view of men and women in after life.

"Women are, in a sense, the embodiment of practice, while men are the representatives of theory. In practice, in a race for life, the runner who jumps everything in his way is always right, unless he breaks his neck. In theory, he is as likely to break his neck at the first jump as at the second, and the chances of his coming to grief

¹ Quoted by Fouillée : *Tempérament et Caractère*, p. 237.

increase quickly, always in theory, as he grows tired. So theory says it is safer never to jump at all but to go round through the gates, or wade ignominiously through the water. Women jump; men go round. The difference is everything. Women believe in what often succeeds in practice, and they take all risks and sometimes come down with a crash. Men theorize about danger, make elaborate calculations to avoid it, and occasionally stick in the mud. When women fall at a stone wall they scream, when men are stuck in a bog they swear. The difference is fundamental.”¹

- ‘ The characteristic concrete outlook of woman causes
 ‘ her estimate of truth to be different from that of man. The true is to woman the harmonious—to man the actual. In other words, woman sees things and events differently from man, and consequently both thinks and reports them differently. She cares more for the look of things, less for their intrinsic nature. This is shown in small matters by her liking for sham jewellery, and for imitations generally, when the real is not easily obtainable. The point with her is that their effect harmonizes with their setting. So, too, the tendency to tell ‘white lies’ which represent her conduct as more harmonious and more consonant with the wishes or ideas of her hearer than it really has been; often, no doubt, more consonant also with her general idea of herself.

- From the general greater impressionability of woman
 ‘ by her surroundings it follows that she has less initiative
 ‘ than man. It is not that she necessarily has a weaker
 ‘ will, but that her strength of will is rather passive than
 ‘ active. She may be strong in resistance, but she is
 ‘ seldom strong as a leader. This is, doubtless, related to

¹ *The Heart of Rome*, ch. 5.

her inferior muscular strength and to her superior physical power of enduring long continued pain and privation. Woman makes a good executant, but she has produced scarcely any original work of the first rank, especially in science and mechanical invention, where the abstract analysis which is so foreign to her is indispensable. Woman, indeed, accepts the customary without question. The continually recurring events in nature do not come before her mind as problems but as agreeable or disagreeable experiences.

In the union of impressionability and power of endurance may be found the source of that devoted patience and that tender sympathy which combine to make woman so generally superior to man as nurse in sickness and comforter in sorrow.

Many other consequences could be instanced of the fundamental differences between the outlooks of the two sexes, but enough has probably been said to bring home the point that in every relation of life there is a divergence between the attitude of man and woman.

The differences, however, are in kind, not in rank. As M. Fouillée says: "The intellectual instinct of woman does not result from the inferiority of her evolution, but from the meaning and the normal direction of that evolution itself. Woman has not 'remained behind', she has advanced, but in the direction which her nature imposes on her."¹

To measure woman's intellect by that of man, and to deduce mental inferiority from woman's inaptitude for abstract thought is to apply a false standard and to reach a wrong conclusion. To value general principles and to value concrete wholes are different, but neither is

¹ *Op. cit.* p. 238 note.

inferior to the other. Each is essential in life, and in this difference of attitude, as in all that follows from it, man and woman are complementary. There is no question of superiority or inferiority, and any course of action based on the assumption that woman should try to become intellectually like man rests on a very insecure psychological foundation.

Like all differences between human beings, those due to sex become accentuated as childhood passes into maturity. Between young infants there are few differences of any kind, and those vague and indecisive, and the younger the babe the more it is like other babies. Quite early in life, however, the fundamental characteristics which distinguish the sexes begin to appear. A little girl of four is essentially a little girl; a little boy is a little boy. Nor could any but the most casual observer confuse them, even though the results of the differences lack that precision which increasingly marks them as the years pass on. The girl is usually more precocious in speech than the boy, and is less often troubled with stammering. The neural connexions which govern speech are matured in her earlier than in her brother. She already plays differently from the boy when playing by herself or with other girls. Her play lacks the force and the expansion of movement which characterizes the boy's; it is quieter, and sooner shows a definite meaning. The girl reaches the stage of imitative play earlier than the boy and persists in it longer. She delights in dolls' parties, in nursing 'baby' and putting him to bed, in keeping school. Here the susceptibility to outside influences shows itself in the most spontaneous form. Afterwards it will lead her to dress according to the fashion in all its possible vagaries

of ugliness as well as in its occasional deviations into beauty.

It is noticeable that this same susceptibility shows itself in greater demonstrativeness on the part of the girl. From an early age she cries and laughs more than the boy, and, generally, gives more violent outward expression to her feelings. Any one who has remarked the conduct of adolescent girls who have not been trained to self-control will have been impressed by their apparent inability to inhibit nearly all modes of muscular movement when they are amused. They laugh with the whole body and with intermittent shrieks and squeaks.

The differences in the expression of will are also plain in childhood. The boy becomes violent when opposed; the girl sulks. That is the tendency, though, of course, in neither case is it always actualized. Passive resistance is the refuge of the girl; active aggression the solace of the boy.

In their mutual relations, too, girls differ from boys. Boys fight; girls nag. The sequel to a fight is a hearty hand-shake and a re-established friendship. But with girls the tendency to inwardness of life expresses itself in brooding over the offence, and this at times develops into a seeking for revenge by ways which a boy would stigmatize as mean and sneaking. Emulation among girls is more likely to be coloured with envy and to lead to dishonourable forms of competition, and more apt to grow into a long continuing hatred, than with boys. Even quite little girls frequently show ill-feeling towards other children who attract notice which they desire to be lavished on themselves.

When we turn to the intellectual distinctions we find

that they colour the learning of the two sexes as soon as the matter studied gives opportunity for the two modes of apprehension. Girls do well in all that demands neither originality of thought nor abstraction. Thus, they quite keep pace with boys, or even surpass them, in the earlier school studies, which deal essentially with concrete wholes. They learn by heart with ease, they delight in neatness and in the embellishment of their written exercises, they work out with accuracy of detail processes with the general form of which they are familiar or which they can imitate from an example. They appreciate beauty of feeling and of form, and so they can enter with advantage on the study of literature at an earlier age than is beneficial to boys. Their earlier attempts at composition are superior to those of boys, because they are more imitative of what they have read in books, whereas the boy gives direct expression, in the briefest and baldest way and in the ordinary colloquial language of his life, to what he has to say. He does not embroider ; girls do. This particularly shows itself when the matter in hand is the production of an account of an imaginary event. The boy's story will probably lack conviction, and will not improbably be incoherent, if not inherently contradictory. The girl will produce a much better constructed plot, and it is seldom that any striking inconsistency will be found in it. Unhappily, she is apt to carry this power of romancing into real life ; and, when occasion seems to her to demand it, to substitute what should have been for what really was. Boys lie, but as a rule they lie clumsily ; girls lie artistically. And much experience and observation seem to show that girls lie more frequently than boys, and from more personal impulses. A girl appears

seldom to lie to save another, a boy often does. Indeed, that is almost the only occasion on which a decent boy will lie. The very want of skill and assurance with which boys usually lie, as compared with the ease and grace with which girls tell their well-invented fables, is an early illustration of that difference between man's and woman's estimate of truth to which reference has already been made.

It is doubtful whether sufficient attention has been paid to such considerations as these by the advocates and promoters of joint schools for the sexes. That boys and girls may be taught together in the earliest stage—say, up to ten years of age—may be granted. The matter put before them gives little scope for their characteristically different modes of apprehension. But the further that early stage is passed, the more do the intellectual differences of the sexes become operative. Soon boys and girls begin to retard each other's progress—the girls being held back for the slower boys in some subjects, and, in their turn, hindering the advance of the boys in other subjects. Of course, this could be met by separating the sexes for all subjects in which collective advance is desired. In small schools that may be the only alternative to teaching them together. But in towns the traditional distinction of schools according to sex would seem to give the best intellectual results. Certainly, that is very markedly the outcome of my own somewhat extended observations.

There seems, however, to be a yet more serious defect in the mixed school as a place of education for all but quite young children. It is that, as the psychological differences between man and woman are so intimate, so deep, and so all-pervading, the real training in character

and in outlook on life of the one sex cannot be given by the other. This consideration is especially important when the age of adolescence is reached, but it has much force years before that. A man cannot be a really sympathetic guide to a girl, nor a woman to a boy, no matter how kindly disposed, simply because the man has never himself been a girl nor the woman a boy. Neither can find in personal experience the thread which leads into the labyrinth, neither has the key to the living puzzle. In short, the mixed school seems in this respect deliberately to dispense with the most essential of all educative instruments. Doubtless, if both men and women be employed on the staff, and if each class have a fair alternation of men and women teachers, the evil may be lessened though not removed. But, as a matter of fact, mixed schools become increasingly officered by women. In the United States of America, where such schools are nearly universal, considerably over ninety per cent. of the teachers are women, and the few men are generally principals of large schools. So that, even in the high schools, which are attended wholly or mainly by adolescents, the majority of the teachers are women.

The argument that as nature has made the two sexes to live together therefore boys and girls should attend the same school, though specious at first sight, has no real force. It ignores the important fact that boys and girls need to be trained for very different functions in life, and that in fulfilling those functions as men and women they will surely not be always together. Thus, it may be retorted, not only that single sex schools by no means negate the natural association of boys and girls in the family circle and among friends, but that they train boys to work and compete with boys, and

girls with girls, without the interference of the other sex ; and that this, too, is part of the training for life. Really, at the bottom of the advocacy of mixed schools lies the idea which, for the reasons I have given, I believe to be profoundly mistaken, that true evolution means the gradual elimination of the differences of sex. When we consider what those differences are, and rid ourselves of the suspicion that, intellectually, woman is an imperfectly developed man, and when we remember further that women teachers cannot enter into the life of sport and games which is so important to the boy and the youth, it becomes clear that if mixed schools are to be justified it must be on grounds other than psychological, and that those grounds must be overwhelmingly strong to justify the ignoring of the by no means weak psychological objections.

CHAPTER VI

NATURE OF EXPERIENCE

“EVERYTHING is in the child and education has only to draw it out” is as true—and as false—as “Everything is outside the child and education has only to put it in.” Each is true in what it explicitly affirms, and false in what it implicitly denies. Each by itself is one of those half truths which when they masquerade as whole truths are most mischievously false. The former would mean that one’s surroundings have no influence on one’s real self or on the essentials of one’s life and character ; the latter that one’s inborn nature is not a determining factor in one’s life, but is absolutely plastic to all its surroundings. Rigid adherence to the one would lead to the abolition of education altogether, on the ground that it could do nothing ; strict application of the other would attempt to make its work co-extensive with life. In education, however, as in other matters, people do not, as a rule, attempt to carry their theories into practice with logical implacability. Happy is it for mankind that they do not. For a general principle is an abstraction, and, as such, omits much in the reality of life. Unless practice take account of the omitted elements its effects are likely to be disastrous.

Although this is so, yet these one-sided theories do

influence both thought and practice. The doctrine that human nature develops from within is urged as the justification for that fashionable distrust of authority which encourages the child as far as possible to follow his own inclinations, and tries to bribe him to learn by various forms of sugar plums. The hypothesis that man is formed by his surroundings leads to an exaggerated estimate of what the school can do, and to the traditional practice of regarding the scholar's attitude as one of passive receptivity. "I have no conception of education without instruction" wrote Herbart,¹ and the schoolmaster, with a natural tendency to magnify his office, has been only too ready to interpret this narrowly, and further to agree with Helvetius that "education makes us what we are."² Education in accordance with each of these hypotheses fails in giving systematic training of the will; the former by denial of discipline, the latter by limitation of liberty.

If education is to deal with actual life it must come to some clear conclusion as to the parts played in it by the inborn nature and by surroundings. To lean now to the one extreme theory, now to the other, according to the convenience of the moment, is one of those practical compromises which may be aptly described as a combination of the evil elements in two opposed plans. The child, now indulged, now subjected to unaccustomed restrictions, is trained neither in self-control nor in strength of will, while his temper is spoilt and his respect for authority destroyed.

The doctrine that surroundings have no essential

¹ *Science of Education*, Eng. trans. p. 84.

² *De l'homme, de ses facultés, et de son éducation*, sect. ix. ch. 1.

influence on life does not, of course, deny that they enter into it. But, for it

“The mind is its own place, and in itself
Can make a Heav’n of Hell, a Hell of Heav’n.”¹

So far we can but feel that there is a noble stoicism in the view, an ideal of independence of circumstances towards which we can, and should, approach. But the theory goes much beyond this. It denies that man’s relations with his fellows are essential, or, in other words, that his nature is social. It regards each as an independent unit which can enter into many forms of combination with other units without internal change. Such a person we cannot really imagine, because the concept does violence to the human nature in which we all share. We see that our own lives are linked in innumerable ways with those of our fellows, that our thoughts and hopes are bounded by our associations with men and things :

“Man is all symmetric,
Full of proportions, one limbe to another,
And all to all the world besides :
Each part may call the farthest, brother :
For head with foot hath private amitie,
And both with moons and tides.”²

We cannot cut ourselves off, even in our minds, from all our surroundings, simply because no thought, no feeling, no desire, would then be left. To be independent of circumstances in the sense of having our course unaffected by the allurements and undeterred by the hindrances they may offer us is not the same thing

¹ Milton : *Paradise Lost*, bk. i. ll. 254-255.

² George Herbert : *Poem on Man*.

as to be independent of them in the sense that we should be what we are had they been other than they have been. Nor is the former independence the result of unhelped inner growth. The child deprived of external control neither resists the allurements of pleasure nor despises the obstacles of pain. Each turns him aside, so that his life is really developing as a series of reflexes to his surroundings. Thus it is that negation of authority in early life cultivates subjection to capricious impulse in maturity. The basis of the educational mistake is an inadequate psychology.

The opposite theory—that man is formed by his surroundings—has never been stated with greater lucidity than by Helvetius: “Everything that we have, and everything that we are, we owe to the external world; nor is man himself aught else but what he is made by the objects which surround him.”¹

The external world enters our life most obviously by the gates of the senses. In all our relations with external things—whether direct or indirect—there is either sensation or reminiscence of sensation. The task was so to analyse the whole of our conscious life into these sense-elements as to show that it contains nothing else. Much ingenuity and great acuteness in analysis have been devoted to this; for this hypothesis of the nature of mental life was dominant, especially in England and France, for more than a century.

If that analysis could account for all the facts we might be driven to accept the hypothesis, however much we might feel that it makes man a very poor creature. Certainly we could not affirm its falsity. That, however, is not the case. It fails most signally to account

¹ *De l'esprit*, vol. ii. p. 306.

for the most characteristic features of all experience—the power of holding persistently to a deliberately adopted purpose. Our own consciousness—and that is the ultimate court of appeal—tells us that this is the very essence of life. But no permutations and combinations of sensations, no matter how ingenious and complicated, can yield on analysis either the feeling of initiative power, or the persistent disregard of sensations for the sake of an anticipated future or in accordance with a past resolve. The theory reduces man to a reflex automaton, responding with every appearance of spontaneous activity to his surroundings, but really passive all the time. What we take for will is, it says, simply the victory of one set of impressions, or the memory of such a set, over all others. To put it quite frankly, all that is to us of the essence of life is a delusion. “We are such stuff as dreams are made of” in very sooth. But, ingenious theorizing as this may be, it is not psychology. Psychology, like other sciences, must adapt its hypotheses to the facts, not the facts to its theories. And no facts are more stubborn than those we class under will—resolve, disregard of obstacles, persistence, fortitude, struggle.

Of course the theory can find no place for the native proclivities and inherited differences we discussed in the last chapter. It demands a mind like a wax tablet—to use Locke’s simile—on which surroundings will trace the inscription we call life. This is, of course, to assume that all men are born mentally equal. So, with his usual consistency, Helvetius wrote: “I shall conclude that the superiority of the understanding is not the produce of the temperament nor of the greater or less perfection of the senses, nor of an occult quality, but of that well-

known cause, education...in which I comprehend the situations in which chance has placed them.”¹ This, as was argued in the last chapter, is irreconcilable with the actual facts of life. So, by every test known to science, the hypothesis that man is merely the creature of his circumstances falls to the ground.

In seeking the true nature of human life we must, therefore, accept each of the two aspects as true determinants. Inborn nature, as we have described it, is a reality. The influence upon us of the external world of men and things is equally a reality. But the reality of each is found only in combination with the other. The former alone is mere capacity and proclivity—the promise of life, but not life itself. The latter gives occasion for activity, but cannot give it birth. Life is throughout that interaction between the individual and his surroundings which we call experience. The springs of action are from within, whether they be the spontaneous promptings of instinct or the impulsion of matured purpose; the opportunities for action are given by surroundings. True, we may seek opportunities; there is our free initiative. But unless we find them we cannot act; there is external limitation. We may speak of acts of thought or of will, of choice and determination, and the like, apart from their objects. But these are abstractions. If we decide to act, it is in a certain definite way, in certain determinate circumstances. If we think, it is about some definite element in our experience. Everywhere and always we find the filling of the thought or of the determination is given from without. From within comes the mode in which we deal with the situa-

¹ *De l'homme, de ses facultés et de son éducation*, sect. ii. ch. 1 and Recapitulation.

tion. May I so far put it technically as to say that the *form* of experience is from within, the *content* from without? Of course, the two cannot be separated. We know no activity apart from surroundings, and we know no surroundings apart from our activity. They may be distinguished in thought, and the error of each of the two theories we have rejected lies in supposing that this distinction implies separation in reality.

It is with such experience that the educator has to deal. He is part of the outer factor for each of his pupils, and as such, he must try to influence the mode in which the inner factor of the child's nature interacts with other elements in the outer factor of his surroundings.

Certainly, in the constant interaction between nature and surroundings the part played by each in determining the actual life varies with individuals. That we have already seen. The strong nature bends his surroundings to his will; the weak is more or less at their mercy. But strength of purpose is itself a product of life. We may start with the possibility of developing it, but not with its actual development. For purpose implies experience and the power of using experience in foresight. So we may say that dominance over surroundings comes only with life.

The relative part in experience of the outer factor is, then, greatest in childhood. Yet, even in its earliest days, the baby is not a mere passive recipient of impressions. He puts forth activity to receive them, and by activity he responds to them. It is true that such activity is at first quite independent of previous experience. It is, however, the activity of his inborn nature, and the groundwork of experience. When random

movements are followed by satisfaction of instinct they tend to be repeated. When such movements fail to satisfy the vague longings of instinct, or lead to positive discomfort, they tend to be inhibited. Each experience leaves a trace behind it in the nervous system in which the reaction has initiated a circuit, and in the mental system in vague reminiscence.

We cannot, indeed, put ourselves in imagination at a baby's mental outlook. We can only judge what it is by his acts. Not by isolated movements, for they may easily give an accidental appearance of meaning which they do not possess, but by the extent to which his acts are organized into series with distinguishable aims. When we thus study the baby, the mental characteristic which stands out most clearly is that, far from recognizing separate sensations and then building them up into more and more complex combinations, his whole consciousness is a vague sentience. In it are at first no distinctions at all, either of things or even of himself from his surroundings. The whole course of life is a progressive analysis of that primary experience. This process goes on throughout by activity. The child finds that certain acts bring certain satisfactory results—that looking, grasping, carrying to the mouth and sucking, result in pleasant tasting. The whole set of actions adheres together by repetition into a recognition, say of sugar, of which afterwards the name is both a convenient label and a permanent bond. Thus, from the first, experience develops as the result of personal activity.

But the baby's consciousness is not limited to the parts of his experience which are gradually beginning to stand out as distinct. These are only little quivering points of light in a great plain of misty obscurity. And

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it is the whole plain which is the child's life. Though its elements are not separated from each other yet he feels pain or pleasure, vague impulses and aversions, all the reactions of his nascent but as yet indefinite instincts on the totality of his surroundings. They are part of his conscious life, though only as a vague undifferentiated mass. Out of this obscure totality arise, slowly but surely, the definite explorations which lead to knowledge. A great step is taken when he learns by the results of his actions to distinguish himself from his surroundings. That, as it were, cuts the whole of his experience into two parts, and makes possible an apprehension of the effects of his own efforts.

To enter in detail into the psychology of the baby is outside our scope. But it is obvious that this process of sorting out the elements of his surroundings and of learning their relations to himself is a slow one. It is much accelerated when he learns to talk and to understand the speech of others, as he can then profit more fully by their experience. Then, too, he soon becomes capable of noting some of the relations of things to other things as well as to himself. But if the reader will ask himself how much there still is in his daily surroundings of which his knowledge is only of a very superficial kind he will grant that the process of clearing up experience is one which life is not likely to see completed. This means, however, that there is always a great deal in our experience on which we are but imperfectly informed. Only to the extent to which we do know anything can we make definite use of it.

That which is present in experience in the mass is part of life as well as that which has been made explicit and clear. This we are apt to ignore both in planning

our own lives and in trying to influence the lives of others. We think only of the comparatively narrow field of explicit attention and definite purpose. So we determine to do something which, when the time comes we do not do because we no longer feel the same about it. So, too, we expect to regulate the conduct of children by appeals to understanding and clear thinking. Of course, we are continually disappointed, just because with them, even more than with us, that which is clear in consciousness now does not long remain so, and even while it does is not always the final determinant of action.

Let us examine what this vague background of consciousness contains. My attention may be strictly concentrated on writing this chapter, or my reader's on reading it. Yet there is a vast mass of other life-process going on as well. Impressions of all kinds from the body itself and, through the sense organs, from the surroundings, though not individually strong enough to force themselves into notice, are collectively giving a colour and a tone to the whole life of the present moment. If all the bodily functions be going on well, and the surroundings be inoffensive, then I write with a sense of ease and freedom very different from the heaviness and dullness which mark intellectual effort when the bodily organism is deranged or the surroundings uncomfortable, as when, for instance, one feels too cold or too warm. Usually the emotional life is thus only dimly conscious. Even when a particular emotion fixes itself on a perfectly definite object its strength lies largely in this mass of undiscriminated experience.

Further, when we have deliberately made up our minds to a course of action we do not keep on thinking

and remembering that we have done so. We simply go on to do it, and we direct our energies towards its accomplishment. The successive steps we take 'fill our minds' as we say. Yet it is not really so. They fill only the region of clear awareness: behind, in the dim background, is the purpose. Though it is not continuously in our thoughts yet it guides and determines those thoughts and the actions to which they lead. This retirement of the purpose into the background explains why it is not always operative after an interval. The new situation may call into play other springs of activity to which, deliberately or implicitly, we entrust the direction of our conduct.

Both purpose and emotion, then,—the two great springs of action, the higher development of inborn propensities—lurk in the background of consciousness. They are, as common parlance very well has it, 'at the back of our minds.'

This vague background is the representation in consciousness of those parts of our surroundings to which we are not definitely attending. We must not, however, confine this to present impressions. Day after day the same general scheme of things is about us. Now and then we notice one or other element in it. But, as a rule, the vast mass of our daily environment draws our attention only when there is some change. If a picture gets awry, for instance, we remark it, though it is by no means sure that we pass on from putting it straight to considering its artistic merit. And to most of the pictures in our house we may very seldom give more than a casual and non-seeing glance. So it may be said generally that most of our habitual surroundings enter our life only in the dim way of which we are

speaking. That they do thus enter it makes them pretty constant constituents of that dim background which is our mood at the moment and, in its prevailing customary tone, our disposition. Their effect is, of course, cumulative; for no impression can be made without modifying at once the nervous system and the consciousness that corresponds to it.

Further, in receiving these experiences we are much more passive than in those of which we are clearly conscious. I cannot, for example, make the aesthetic effect of my surroundings different from what it is so long as I remain amid those surroundings, and other considerations may render that imperative. Evidently some environments are much more favourable to the growth of a full and rich experience than are others, though all give at least some occasion for the exercise of all the powers with which the individual is endowed.

It follows that no man is the same as he would have been had he been brought up amid totally different surroundings. Take an English baby and let him grow up in a Hottentot kraal, and his ideas of life, his modes of thinking and of acting, will be very different from what they would have been had he lived in England. Or take him from the class in which he is born and let him be brought up in a family of quite another social rank, and again the difference will be real though not so marked as in the former case. Surroundings are always affecting the dim background of consciousness, and so influencing mood and disposition, and instilling through the influence of habituation certain standards of taste in reference to all the customary things of life. A person who grows up and lives amid squalid surroundings and rude manners becomes accustomed to them.

They fix his standard without conscious thought, and that standard governs his own mode of life and behaviour. One, on the other hand, who has had the happiness to be born and to live in a refined circle, gets with equal absence of effort a standard of good breeding.

Surroundings, then, come as influences into our lives both with and without our full knowledge. As giving scope for our conscious activity of body and of mind, and at the same time limiting it, they enter the fully conscious life. As moulding our moods, our disposition, and our taste, they enter the sub-conscious life. As constituents of the latter they are a powerful factor in determining the former.

In trying to understand the experience, then, of any individual, account must be taken not only of his inborn nature and of the deliberate attempts made to shape it to which we usually restrict the term 'education', but also of everything which in any way comes into his life. The man is the concrete being who has become what he is because of the continuous interaction between his inherited nature and the whole of his surroundings. Some, indeed, have preferred to include this whole environment under education. Thus, Rousseau wrote, "Education is given by nature, by man, and by things. The internal development of our powers and of our organs is the education of nature ; the use we are taught to make of this development is the education of man ; the gaining of our individual experiences of the objects which affect us is the education of things."¹ John Stuart Mill expands the same idea—"Not only does education include whatever we do for ourselves, and whatever is done for us by others, for the express purpose

¹ *Émile*, livre i.

of bringing us somewhat nearer to the perfection of our nature; it does more: in its largest acceptation, it comprehends even the indirect effects produced on character and on the human faculties, by things of which the direct purposes are quite different; by laws, by forms of government, by the industrial arts, by modes of social life; nay, even by physical facts not dependent on human will; by climate, soil, and local position. Whatever helps to shape the human being; to make the individual what he is, or hinder him from being what he is not—is part of his education.”¹

Obviously, in this wide application ‘education’ includes elements which tend to deform as well as those which make for improvement. As Mill adds: “And a very bad education it often is; requiring all that can be done by cultivated intelligence and will to counteract its tendencies.”

It is, I think, generally convenient to use ‘education’ in its more customary and restricted sense, because it is impossible to give any practical rules to govern the wider and vaguer influences on life which are so largely outside human control. But in doing so it is vital to remember that we are excluding from the term a great deal that is formative. In so far as an educator can modify or determine any of those factors of experience which are not part of education in the narrower sense, to that extent his efforts are indirectly educative.

By far the most important of the formative influences which mould us more or less without our knowledge and independently of our will is the general view of life, or the public opinion, of the people among whom we live. “In every age it has constituted an important

¹ *Inaugural Address at St. Andrews.*

element of the social life of modern Europe. Who can say whence it arises, or how it is formed? We may regard it as the especial product of that community of interests and feelings which binds together societies; as the clearest expression of their inward movements and revolutions. It derives its origin and its nutriment from hidden sources, and, requiring little support from reason or from evidence, takes possession of the minds of men by involuntary conviction. Yet its apparent uniformity is in fact confined to the most general outlines; for in the innumerable circles, wide and narrow, of which human society is composed, it reappears under forms the most various and peculiar. New observations and new experiments are constantly flowing into it; original minds are ever arising, which, affected by its course, but not borne along by its stream, react forcibly upon it; and thus it is in a state of incessant flux and metamorphosis. It is sometimes more, sometimes less, in accordance with truth and justice; being rather a tendency of social life and an impulse of the moment, than a fixed system.”¹

The minds which are at once original and powerful are few. Consequently, most adults and all children and youths owe to their human environment much more than they give to it. Within the broad general limits of accepted custom they may shape their own lives, but they never escape the moulding restraint of the community.

When we turn to more specific classes of surroundings we have as the chief differences those of social class and of locality. Neither can, as a rule, be changed by the individual educator. Yet it is well that he should

¹ Ranke : *History of the Popes*, tr. by S. Austin, vol. i. p. 88.

recognize the kinds of modification of development which naturally result from such differences in environment.

Of the former mention has already been made. It affects the bodily health and development, the general outlook on life, and the conception of the relation of the individual to his fellows. Careful measurements show that children in elementary schools are appreciably less in height, in weight, and in general vital power, than those of similar age in schools which draw their pupils from the wealthier classes; and that children in the country are in these points superior to those in the towns, though in a less degree.

Obviously, in very poor homes the town child is at a disadvantage as compared with the young countryman. The latter at least gets fresh air, one of the necessities of a healthy life, in much greater quantity and of much purer quality than does the former.

It is, however, a common opinion that the town is at least as much superior for mental life as is the country for physical life. All considerations of mental development lead me to the opposite conclusion. For, putting on one side the close relation between physical vigour and mental vitality, it may be pointed out that the country is more favourable to manifold activity than is the town. Through the varied dealings with things which fill much of the life of a country child while the town child is idling round street corners or playing in the gutter, the former learns much. Again, the wide vistas of the country are more favourable to the cultivation of good eyesight than are the cramped spaces of the town. Like every other organ the eye develops by exercise, and when practically the only long outlook available is up into

the sky, the natural result is some degree of near-sightedness. Doubtless the country school does as much as the town school to injure eyesight. In each children are too exclusively engaged in reading and writing, and in each there is far too little insistence that the eye shall be kept at a distance from the page which minimizes the evil. But the country offers compensations which the town does not. Whoever will consider how much of our knowledge of the external world comes to us through sight will at once see that this limitation of vision is a mental loss as well as a physical injury.

If it be considered further how the life of intelligence and purpose develops by the gradual sorting-out of the items of experience, it will be apparent that a smaller number of impressions continually repeated is more desirable than a larger number constantly changing. Here, again, the country or small quiet town has an advantage over the large town. The town child is acquainted with more persons and things, but he knows less about them. So grows up that superficiality and shallowness, leading often, even as early as adolescence, to the feeling that nothing is worth much trouble and that all has been experienced, which increasingly characterizes our town youth. "Children whose first remembrances are full of new impressions grow old quickly, while those to whose perceptions little is offered grow up more slowly and more naturally. Other conditions being the same, these latter will be calmer, healthier, and more reasonable."¹

The quickness of the town child is more than compensated by the greater solidity of the country boy or girl.

¹ F. Marion Crawford : *Greifenstein*, ch. 2.

It is a case of Ascham's "quicke and hard wittes", artificially induced by surroundings.

Morally, as well as intellectually and physically, the country is preferable for a child. He knows few people, but he knows all he meets and he learns to sympathize with them. The town child, though he lives amid the citizen crowd, yet knows and cares for few. In the country the young boy or girl is not an unregarded unit to the great majority of the people he meets, but to the town child it has never been matter of surprise

"how men lived

Even next-door neighbours, as we say, yet still
Strangers, not knowing each the other's name."¹

The village child grows up in some consciousness of the brotherhood of man; on the town child is much more impressed a selfish ignoring of others.

Doubtless country life is open to the danger of stagnation and narrowness of interest. But these are evils for the adult rather than for the child. Life needs to be deep before it is broad, or its breadth is but shallowness.

All such arguments as these are in favour of the position that the bustle of a large city is the worst environment in which a child can be brought up. Probably a small town is best of all, as it widens experience without scattering it.

It is now evident that surroundings count for much in life. Were it not so man could learn little from his fellows. They do not count for all, because human nature is essentially active. In addition to the instinctive proclivities discussed in an earlier chapter, we are

¹ Wordsworth : *The Prelude*, bk. vii. ll. 116-118.

all born with an innate tendency to become like our fellows. This has of late years been called by some the instinct of imitation, and the application of the term has been stretched so widely that practically the whole of mental life is included in it. But the very generality of the tendency removes it from the class of true instincts, all of which have a definite emotional centre, as well as more or less defined modes of reception and reaction. In contrast with this, the assimilative tendency appears in activities of all kinds, and is devoid of characteristic emotional tone. It is preferable, then, to regard it as an innate tendency and not an instinct.

The wide extension of the term 'imitation' is open to more serious objections both psychological and educational. Imitation thus used, is essentially a judgement of the observer passed on actions because of their resemblance to actions previously perceived by the actor. From this external standpoint it is evident that at least an element of imitation can be found in all we do. But when we turn from this external character of the acts to their meaning in the life of the actor we find that the similarity has disappeared. Except, perhaps, in early life, to make a copy is seldom the object in view, and only in so far as it is can the act be classed as imitative in intention. Psychologically what is needed is an examination of the internal springs of action, not an obscuring of their differences because of an entirely external and, it may be, accidental resemblance. Nor is it convenient to depart so far from the ordinary use of words as to speak of imitating the thoughts, desires, and resolutions of another ; or to say that each successive time we do an action we imitate our previous efforts. Still further is it removed from the language of the plain

man to call the formulation of a scientific law an imitation in thought of the workings of nature.

Educationally also the wide and loose use of the term is unfortunate. For one of the most important and difficult tasks education has to perform is to decide how far a child shall act on its own initiative and how far on the lines laid down by another ; to determine the respective parts of originality and copying. To lump both the processes under one term can only obscure the issue.

The general tendency of man to assimilate his mental life to that of his fellows shows itself not only in act but in feeling and thought. The gregarious instinct prompts human beings to gather together. Each feels a satisfaction in being with his fellows, even though they are all strangers to him and there is no common purpose. Now if there be added anything in the nature of such a purpose—anything which in any way binds the collected units into a group—there appears this assimilative tendency. A crowd hearing an impassioned orator becomes swayed by emotion much more violent than any one individual in it would have felt had the same oration been addressed to him privately. Moved by such emotion the crowd will often commit deeds which the majority at any rate of its constituents would not have done had they not been part of the crowd, but in which, it may be, they take an active share. This induction of feeling through a group of people is well named by M. Ribot 'emotional unison.' In the etymological meaning of the word it is 'sympathy'; that is, agreement in feeling. But ordinary usage has restricted 'sympathy' to a much more advanced and complex sentiment, implying in addition to this foundation of emotional unison some tenderness towards the individual

with whom we sympathize and some power of intellectual representation of his condition.

The importance of the tendency to unison of feeling is obvious when it is borne in mind that emotion prompts to action. Many actions really owe their external resemblance not to imitation but to such a common emotional origin. Let us take a school example. Every teacher knows the difference between a class in which there is a general spirit of work and one in which the prevailing sentiment is towards 'rotting'. Each boy is infected with the general spirit, so that in the one case the naturally idle puts forth effort, and in the other the naturally industrious relapses into frivolity. It is not that individual boys set themselves to imitate their fellows in these matters, but that, being in the class they have this innate tendency to assimilate themselves to its standards. The same thing is true in that wider sense in which it is customary to speak of the 'tone' of a school or class. Here again the fundamental factor is the assimilation of the individual to the common life. It may be noted in passing that the teacher is subjected to this influence as well as the pupils, and if he be a weak person or one who is aiming at popularity or at cultivating a kind of artificial sympathy his efforts to "take the boys' point of view" as to the value of work may lead in time to his adoption of it as his own.

The more society is divided into groups with little contact with each other the more each group tends to have a marked class-feeling. Separation of classes means that each is ignorant of the ways in which the others look at matters common to the whole community. Hence is very likely to arise some amount, at any rate, of class-suspicion and even of class-antagonism. Here

again becomes apparent an evil of large towns in which the working classes are segregated from the more wealthy classes to which the employers of labour belong. In the country social ranks are brought much more into contact with each other, and from their intercourse springs at least some mutual understanding with its natural outcome of mutual esteem and respect. When many individuals live wholly among their own class their outlook and sympathies tend to be narrowed down to that class. Both sympathy with other classes and regard for the wider interests of the nation as a whole are gradually atrophied.

It may be said, and justly, that in such cases there is not only emotional but intellectual assimilation—the acceptance of ideas as well as the sharing of the common emotional relation to conduct and things, and, consequently, an assimilation of purpose. Certainly it is so, for life is a whole and the distinction between its various aspects is only a convenience of discussion. It is, indeed, in this general assimilation that we find the explanation of much, if not most, of what from the outside standpoint would be called imitation.

It would be strange indeed if a child did not assimilate his thoughts to those of the people around him. From them he learns his language, and that acquisition is not merely of words but of ideas and of ways of thinking. A boy who hears his family circle discuss theft as a matter of course will regard it in that light unless, or until, other surroundings impress the opposed view upon him with sufficient strength to oust the original doctrine. So, too, the boys in the classes we have supposed will assimilate to each other in their estimate of the worth of lessons in general and of their class lessons in par-

ticular as well as in their feeling towards them. And the two together involve the participated tendency which manifests itself in their actions.

The whole mental attitude may modestly remain in the background of consciousness where it always originates, but it is not the less effective for that. If the tendency be an undesirable one, as in the case of the 'slack' class, the only effective cure must begin by dragging it from its lurking-place. When people realize the nature of their behaviour it challenges their approval or condemnation. Only when it is condemned will any effective change be made. But most boys are decent fellows and quite fair-minded enough to acknowledge that 'rotting' is hardly worthy of them.

In addition to this kind of general absorption of the opinions of those around us, there are innumerable cases in which ideas are definitely and explicitly suggested to us by others. Now the characteristic mark of suggestion is the omission of proof or reason, as is seen most clearly in cases of hypnotism. But we are all liable to such suggestion, especially when it comes to us saturated with emotion; though the suggestibility of individuals varies, as does that of the same individual at different times. Generally we may say that everything which decreases the dominance of clear purpose, or which increases the influence of the background of consciousness relatively to the clear centre of attention, increases suggestibility. So, as we might expect, sensitive emotional temperaments are the most apt to absorb their thoughts from others. In our individual lives fatigue increases our liability to accept suggestion. So, too, does limitation of knowledge. In a subject with which I am familiar I naturally require proof

before accepting a new proposition. But in one in which my knowledge is vague I shall be likely to receive without demur ideas suggested to me, especially if the suggestion comes from a person whom I respect, and more especially still if I believe him to be an authority on the subject.

The bearing of this on teaching is not difficult to see. Despite the ardent advocates of the view that every child should find out every thing for himself the practical teacher knows that he must tell his pupils many things, not only some which they cannot find out, but some of which the proof would be unintelligible to them. He acts on their suggestibility. So, indeed, do the preachers of the new doctrine act on the suggestibility of the general public. With teachers, practical experience forbids the reception of the suggestion; so, of course, practical teachers are condemned by these enthusiasts as fools or knaves or both.

The effect of suggestion is not a mere shaping of a passive and inert mass of information. Real ideas are parts of life—tendencies, direct or indirect, to action. Most obviously is this the case when the idea suggested is closely connected with conduct. One suggests to a child that something is worth doing or worth learning. If the suggestion works he proceeds to do or to learn it. Or one suggests that such and such is the best way of accomplishing his purpose; if the suggestion is adopted he tries that way. A suggestion differs from a command in the kind of appeal it makes. The ensuing behaviour may be identical in the two cases; the character of the act is entirely different. One displaces the child's initiative; the other prompts it. Certainly there are occasions, especially in early life, when definite

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command alone is adequate to meet the situation. Equally certain is it that suggestion should be increasingly the rule, command more and more the exception, as the child increases in intelligence, foresight, and self-control. Command means control from without ; suggestion cultivates control from within.

Some individuals, as we have already seen, receive most suggestions negatively. They are the contrary people whose delight it is to be different from others. A good many children go through a temporary period of contrariness—often about ten or eleven years of age—and grow out of it again. It is due, probably, to the vague consciousness of increased power which seems to mark this period. Others, however, are born so, and continue so till the end of the chapter, to the combined amusement and annoyance of their friends and acquaintances. This opposition to the suggestions of others is not strength of will, as the individual fondly believes it to be. Indeed, the more cantankerous he is the more suggestible he is. The only peculiarity about him is his mode of reaction. Those who know his foible find it quite easy to manage him. They simply urge him not to do what they wish him to do.

It is evident that suggestibility has a legitimate part to play in every life : it is further obvious that a life governed by suggestion would be a pale shadow of its surroundings. Self-confidence and self-initiative are needed. Of course, it is arguable that in the most original thoughts of men there is always something due to others. It is a matter of degree. But it is better to restrict 'suggestion' to the offering for acceptance of definite ideas without proof. This grows out of the general influence of the intellectual life of the community

upon the individual intellectual life, but should not be identified with it. And it is from the general intellectual heritage that the original thinker has drawn some of his material much more than from definite suggestions of others.

Suggestibility implies the activity of the instinct of self-abasement; self-confidence springs from that of self-assertion. The due union of the two gives the sane mental life of him who is prepared to listen to all sides, but who himself pronounces judgement.

It is plain that the origin of many actions which outwardly appear as imitative has already been found. It will add to clearness if we use the term 'imitation' very strictly. What do we mean when we say we will imitate something? Surely, this—that we will make a copy of it. In other words, from the standpoint of the doer imitation is intentional. In so far as our copy departs from the original, it fails as an imitation. If I employed an artist to paint a copy of Raphael's 'Madonna del Granduca' I should be little pleased were he to show his originality by making alterations. No doubt there would be differences due to want of skill, but the artist would deliberately set himself to imitate the original, and would make those differences as few and as small as he could. Let us take another case. Suppose I do a conjuring trick before an appreciative group of small boys. I shall be besieged with requests to "show us how to do it". I show them, and they all try to perform the trick. They fail at first because their imitation is not close enough, but, when their copying of my actions becomes exact they succeed.

Here we have two typical cases of imitation. In the one the product, in the other the process, is copied. The

latter imitation is direct ; the former is indirect, for to produce the copy a similar use of paints and brushes must be made as Raphael himself made. The actual painting of the master is not available as a model, and the requisite skill has to be otherwise acquired. Taking the whole process, it is apparent that in the copying of a product, as distinct from the imitation of a mode of action, there is a considerable element which is suggestion and not imitation at all. The picture to be copied suggested the actual process of painting, yet it suggested it within most explicitly marked limits and on most definitely laid down lines. The result was determined in detail, not simply as a whole.

In the copying of the conjuring trick, however, we have imitation pure and simple. Both result and process are to be reproduced as nearly as possible. Any variations that may actually occur are involuntary. They are not at all due to an intention to be original. On the contrary, the whole wish is to do the trick correctly.

Now suppose two corresponding but different cases. An art student at Florence is very likely to copy the Granduca Madonna among others of Raphael's pictures for the purpose of acquiring the master's general style, or his skill in colouring. Afterwards he uses this skill in painting pictures of his own devising, and in using it he modifies both the style and the colour-texture. Imitation has been to him a means through which he has attained power to express himself in his art. But to call his own pictures imitations would be a misuse of terms. One may find much in them that is reminiscent of Raphael, but the correct explanation of that is found in the powerful suggestive power Raphael exercises over him.

In the second case let us imagine that one of our young friends is of an ingenious turn of mind, and that on the basis of the trick he learnt by imitation he invents another trick. Here again we have suggestion, not imitation, and here again the strength or weakness of the suggestion will appear in the less or greater divergence of the new trick from the old.

Process necessarily precedes result. Consequently, imitation of process is earlier than imitation of result. The latter is impossible without skill already acquired, the former helps the acquisition of that skill. But even imitation of process is impossible unless the kinds of movements and co-ordinations of movements in the action are already under control. In the acquirement of these what is often called 'unconscious imitation' plays an important part. Now, 'unconscious imitation' is a description in which only the adjective refers to the mind of the actor, while the reference of the noun is to the mind of the onlooker. This is both confused and confusing. When both adjective and noun are referred to the mental origin of the action their combination is a contradiction in terms. When both are referred to the external appearance of the action the adjective is devoid of meaning, for the suggested distinction between conscious and unconscious imitation does not appear in the character of the act looked at from without. If a baby, or an adult for the matter of that, unconsciously does an action which another has just done, it is a contradiction in terms to speak of him as unconsciously imitating. We all know how contagious is a cough in church, and, to a less degree, a sneeze. Is it not an abuse of language to say that all who cough or sneeze are imitating the first cougher or sneezer? Do we not try, on the contrary, to

resist the impulse, though it is often too strong for us?

That a baby does make movements which it sees others make is certain. But at first it assuredly has no intention to copy, nor even a recognition of the resemblance which is apparent to the onlooker. Until it does make the movements as intentional copies there is no imitation. As soon as it does so make them, we have a proof that its purposive life has begun. To take another case of what is often called unconscious imitation. Each person learns not only to speak the language of those around him, but to adopt their mode of pronunciation. Remove a child, say of ten years old, to another district, and after a few months his speech will be a quaint combination of the two dialects, old habit contending with new influences and gradually yielding to them. Yet he has never set himself to acquire the fresh pronunciation, as, for example, a schoolmaster who learnt Latin with the traditional English pronunciation may deliberately set himself to produce the sounds at present judged orthodox. Similarly, the general modes of behaviour which we embrace under the head of 'manners' result from our surroundings, but are not gathered by imitation. The difference between assimilation and imitation becomes very apparent to any one who deliberately sets himself to acquire the conventions of a higher class of society than that to which he has been accustomed.

The child's first movements are in part purely random, and in part due to that unconscious assimilation of oneself to one's surroundings which underlies all conscious attempts to enter into the feelings, thoughts, and purposes, of those around us. Such unconscious assimilation, as has been pointed out with respect to feeling and

thinking, can only be modified by changing the surroundings or by awakening a definite desire for change—such as is aroused when a youth deliberately tries to improve his manners.

The function of real imitation in life is now laid bare. It is to help in the acquirement of skill. Combined with suggestion it may give an object of pursuit. In the former case it works immediately; in the latter it really gives an ideal to which the nearest possible approximation is desired. Throughout it is purposive. Long ago, indeed, it was classed by Plato under “productive or creative art.”¹ Of course, one’s purpose may be to do something one has seen another do, and in doing it one may copy his mode of action. Then the imitation is intentional though the main purpose is not to imitate. One imitates as a means to the desired end, but every such end carries with it the definite intention to follow out the necessary means. For example, a boy moulds himself on his favourite batsman. But his real purpose is to become a good batsman himself—if possible better than his model. He uses that batsman’s style as a foundation for his own, and, the more skilful he becomes the more does imitation fade into suggestion in the regulation of his own style by that which inspires it. But throughout, the purpose was the development of power for himself.

The place of imitation in education follows. So far as imitation helps in the acquirement of any form of skill it is good; so far as it checks initiative it is bad. In any case it is preferable to compelled uniformity of action. One of the chief educational objections to the external test of imitation is that under one term are massed

¹ *Sophist*, 219.

together such outwardly determined uniformities and the uniformities which spring from the inner desire to do what somebody else has done. It is excess of the compelled uniformities in school which is to be regretted and combated. True imitation is the expression of a felt need, and will be resorted to no more when the need is satisfied. It is always a tool, never an end in itself.

Children, like adults, differ in the extent to which they imitate. That is a matter of temperament, and is only one special aspect of the general tendency to be more or less formed by surroundings which meets us in every department of life. A wise educator tries to reduce excess on the one side or the other in this as in other forms in which the general assimilative tendency shows itself. The fundamental mistake possible in the matter is an assumption that imitation and originality are essentially opposed to each other in practical life. No doubt they are from the point of view of the observer; by no means so from that of the child. In each case he has a purpose to fulfil, and that originates his action. Whether the result has been achieved before is, psychologically, a small point. Most of us never do achieve a result that is quite novel. Even with the most imitative child the purpose is generally to achieve or to become something, and that something is not yet in his life. He may imitate in reaching his purpose, but the imitation is only a subordinate intention. The whole activity is directed to the ideal suggested from without, as all our ideals more or less are. Imitation of imitations, however, can only develop executive skill, and is thus ancillary to the free use of imitation in the pursuit of purpose. The method of teaching drawing recently current in England failed because it ignored this.

To forbid a child to imitate is to prevent him from getting help from others of which he feels the need, and which his own being prompts him to seek just in that way. The often expressed objection to imitation always assumes that in an imitative act the child is passive, and that imitation and origination are incompatible. I trust that on each count I have shown that the objection springs from the unfortunate custom of deciding the nature of imitation by the appearance of the act or result, instead of by an analysis of the consciousness in which the act originates.

All development of life implies that living is a cumulative process,

“That men may rise on stepping stones
Of their dead selves to higher things.”¹

This, indeed, is of the very essence of growth as compared with mere succession. Did events in life simply succeed each other and leave no trace behind, then “it is evident that even life itself, in its worst and most miserable state, could not be supported; since, though oppressed with thirst and hunger, and within reach of the most delicious fruits and the most plentiful spring-water, we should still suffer, without any knowledge of the means by which the suffering could be remedied.”²

The point needs no labouring. We all know that each of our activities, whether of thought or of action, is based on simpler activities of a similar kind. One must be able to walk on the ground before one can learn to traverse Niagara on a tight-rope; a mastery of more elementary mathematics is an essential preliminary to a

¹ Tennyson : *In Memoriam*, i.

² Brown : *Philosophy of the Human Mind*, Lect. 34.

successful study of the calculus ; an affection for those nearest to us is the only root from which can grow a far-reaching benevolence.

In every case there is in development an increase both in differentiation and in complexity. This is most easily seen in the examination of a piece of bodily skill. In learning to draw, the child can at first make but few and simple strokes. The niceties of form escape both his observation and his executive power ; if they be pointed out to him he cannot represent them. So with learning to play the piano. The movements possible at first are simple, slow and awkward in execution, often mistaken. Increase of skill in each case is the gradual but continuous expression of fresh differences, and the equally constant combination of movements into more elaborate wholes. Such activities are at once intellectual and physical, and the elaboration and growing perfection are in apprehension as well as in manual dexterity. Activities in which bodily movement is unessential follow the same law of progress. A child must learn to use the simple operations of arithmetic before he can attack problems which involve them. He must know, for example, the product of seven and each of the first nine numbers before he can multiply a longer number by seven.

In every case there is involved both habituation resulting from past experience and accommodation to meet the demands of the new situation. Behind both, as the very origin of the whole, is developing purpose. It is because the child wishes to meet the new situation that he calls into use the skill he has already acquired and uses his intelligence to modify it to suit the present case. The keynote of all development is purpose. As soon as purpose fails to expand, life ceases to become richer or

more effective. Then habituation is dominant; the adaptations made are of small importance. They are only to conditions of like scope; there has ceased to be accommodation to wider and more complex demands. Habituation is thus seen to be a good servant but a bad master.

There is no need to enter at length into the origin of habits. Everyone knows that they result from repetition, and from nothing else.

Any reaction on impression makes a circuit in the nervous system; every repetition of the same reaction strengthens it. The circuit may involve a cortical centre, in which case we are conscious of the reaction; or it may pass through a lower centre, when we are at the most very dimly aware of the act. This is the case with those many habitual mannerisms which mark the behaviour of every person, but of which there is little or no consciousness, unless attention be drawn to them by another. In such a case the reaction is as nearly automatic as human life ever becomes. It has probably originated without deliberate intention, and is one of those reflexions of the acts of another which are due to unconscious assimilation. Such habits are plainly not of vital importance in life. A man may be both a valuable and an able member of society, though his every-day manners do not satisfy the conventional demands of the most refined circles. They are, however, among the most difficult habits to break, just because of their petty nature. The circuit is so simple that nerves and muscles act mechanically, and it requires much patience and watchfulness to rid oneself of any of these peculiarities.

These, if the simplest, are the least important examples of human automatism. The habits which

really matter are those which are organized into acts of increasing complexity and form the very substance of skill. These either originate in such an instinct as curiosity or constructiveness and use imitation of another's acts as a guide, or begin immediately in an impulse to copy what another does. In each case the form of the activity is given by imitation.

Now, the essential point to notice about these habituations is that they are continually undergoing modification. Take a child learning to write. He twists his whole body, holds his head in many unsuitable positions, very likely protrudes his tongue, frowns fiercely, and clutches his pen with a desperate grip. The motor reactions are many more than are needed, and include some that positively hinder the desired action. No doubt, if left to himself the child will in time get the circuit pretty clear, by gradually discovering and discarding the movements which are the most inconvenient. But he will do it all the more quickly if in the process he is helped by example and direction. Imitation here plays an important part, not only in initiating the complex reaction but in guiding its improvement. The total activity is from the first a synthesis of many movements, each of which can be made separately. Indeed, when a child performs one part of the process worse than other parts the teacher often picks it out, shows the child how to do that act by itself, and calls on him to practise it—that is, by repetition to bring it up to the level of the other links of the chain.

When the child can write from a copy the first stage of the acquirement is accomplished. He now makes only the required movements, and he makes them more or less continuously. He has not to attend specially either to how he sits or how he holds his pen, or to the

hand and finger movements required to produce each separate stroke and curve, though, probably the teacher's voice will at times remind him that perfection has not been reached in one or more of these matters. Let it be noted, however, that invariability is confined to details. The activity as a whole results in a line of writing, and has to be adjusted afresh for each different line. The power to produce so variable a whole is a gradual acquirement, and involves throughout the production of simpler elements and their appropriate combination. Analysis may easily lead a teacher anxious to simplify to think only of the elements and to try to build up writing from the foundation of various forms of strokes. No doubt the child learns to write when he is set to write, but when that time comes there is neither psychological nor physiological ground for believing that the preliminary exercises had any other effect than to rouse his dislike of the process by depriving its earliest stages of meaning. The unit of understanding to the child is the word, and the earliest writing exercises should deal with words, united nearly, if not quite, from the beginning into simple sentences. Any preliminary training in using a pencil and producing simple forms should be incidental in his drawing, not put before him as drill preparatory to writing. A fundamental error which vitiates much teaching of many subjects lurks in this method of beginning with abstract elements. It is that purpose is eliminated. The object the teacher has in view is that the child may acquire the skilled craft of writing. But that is not a purpose to the child so long as it is locked up in the teacher's breast. Nor, indeed, even if it be announced in that general form. For the child young enough to be beginning to learn to write

cannot work for a purpose to him an illimitable distance ahead. To write immediately the name of his friend Tom is a purpose he *can* feel. To make his first writing lesson an attempt to produce this interesting word will call forth an energy which will disregard obstacles, come up smiling after failure, and persevere till the desired result is produced. Till teaching shakes itself free from the educationally deadly theory that life is directed from without it will always lose the greater part of its possible effectiveness, just because of this same want of faith in the child's fund of energy ready to rush forward to any end which seems to him worth attaining.

The later stages of the process of learning to write develop in the same way. More and more of the executive part of the activity becomes automatic; more and more the adaptation to new requirements is freely at the disposal of the intelligence. The second step is obviously writing from memory a phrase containing only words which have often been written by imitation. Here the form of each word—which we call spelling—has to be produced without a copy. It is evident that much repetition is a necessary preliminary to that. Nor need that repetition have been only with the pen. Many minds form habits of utterance, and to such the oral spelling of a word letter by letter, whether aloud or silently, is a considerable help in forming the habit of writing it correctly. Children, like adults, differ in the way in which they naturally learn such things, and the wise teacher will allow each to follow his bent. Many, perhaps most, say the separate letters as they write them. That is, they name them. Why not encourage them to say the letters as they look at them after they have written them if they find it helps them? If the purpose to learn

to spell the words has been roused in the child's mind he may safely be left to do it in his own way. Doubtless the old scholastic tradition of hearing a child say lessons he had learnt had its disadvantages, but it did, at any rate, leave each free to learn them as he would, and it certainly gave him a reason for learning them, though not of the best kind. The newer methods tend to take this freedom from the children, to make the learning of all an imitation of the same method, and thus to keep the intelligence in leading-strings. By deadening initiative such a course deadens effort. So the learners have to be stimulated by an external appeal no better, if more agreeable, than the old one, for pleasure and pain stand on the same moral level. In short, many modern methods of teaching, in attempting to make learning easy to the child, give so minute a guidance of action that they eliminate all virility from the learning by banishing purpose, effort, and originality. But without the cultivation of these the habit of expecting by one's own efforts to reach better things than those of the present cannot be formed.

The third and last stage in the acquirement of the art of writing rests on automatism of formation both of letter and of word. The purpose is now to express ideas. This leads into all the possible developments of composition. Into this it is not necessary to enter at length. The process is the same throughout—each step secured is only the starting-point for a further advance. The bald, awkward sentences of the beginner advance little by little to the grace and force of style of which each is capable. Here, again, the neglect of the appeal to purpose is too frequently seen in the very early stage of development at which the advance of many a school

boy or girl stops. They have no desire to write well : they only produce their 'composition' because the teacher tells them to do so. But to them a composition is a composition, and one is as good as another so far as form goes. Only in the subject-matter, and that not always by any means, is their interest aroused. Again, I think, the teaching is vitiated by an inadequate psychology ; by a want of recognition of the relative parts of purpose and habit in human life.

Such an analysis as we have here made of writing would apply to all forms of executive habituation. In some the combination in definite series is more important than in others. The multiplication table, for example, is not a series operatively. Consequently, it should not be established as a habitual series by the writing or repetition of 'tables'. That results in a child being unable to give the product of seven and nine without saying the whole of the seven times table, if not all those which precede it in the books from "twice one is two". Similarly, a boy who has learnt the paradigms of the Latin declensions as a preliminary to the use of any Latin words will begin with the nominative singular and say through the whole list of cases till he comes to the one he needs, it may be the ablative plural. In other cases, as in learning poetry, the correct series is all important. The mode of actual future use should always determine the mode of learning by heart—that is, of forming a habit of doing and saying.

The value of the development of such automatism as we have described is apparent. The adaptation it makes possible means that intelligence can get to grips with the new, and leave habit to deal with the old. As the new is conquered it also becomes old, and is transferred to the

province of the executive. Of course, the new and the old are not separate, standing side by side. They are combined in all sorts of ways in reality. Consequently, our activity which deals with them is one activity, not two. It is impossible to cut off the automatic from the originative. The two interpenetrate each other, as will be plain to any one who has mastered such an example as that of writing. We may say, indeed, that the whole activity uses its automatism intelligently. It follows that individual habits are not developed by any one of us beyond the stage at which that kind of automatism is useful in our lives. So that if ever habit comes to play a part at all analogous to that of instinct in the lives of the lower animals there is arrested mental development, for progress is then no longer held to be desirable.

This leads us to consider those wide trends of mental life which are directive rather than executive, yet are habitual in their constant recurrence. To distinguish these from the habits of executive dexterity already considered it is well to name them 'habitudes.'

Most of the habitudes of the majority of folk, and many of those of all, originate in the cumulative influence upon the individual of his surroundings. The general modes of belief, of aspiration, of attitude towards others, of estimates of worth, are really habits of the community, passed on from generation to generation, and forming the social tradition. We have seen how we draw these in with our earliest breath. They are expressed constantly both in the actions and in the speech of those about us. We learn that speech, we imitate those actions. That is, we talk of the things of life as we understand them from the point of view current in our social circle, we feel and act towards others

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as we see is customary. The influence of such habitudes in enabling us to enter into the life of the community, and to draw spiritual sustenance from it, needs only to be mentioned to be obvious. But it carries with it a danger. As life goes on these habitudes grow stronger. As intelligence develops they may become narrower, unless an impulse of feeling lead us to see that our duties and relations are not cabined and confined within the strait limits of our immediate circle. Such narrow but intense habitudes, accepted without individual thought from without and operative only in the realm of the familiar, into the mould of which they persist in forcing everything new and strange, we know as prejudices. Each of us is convinced that at the most one person in the world is free from prejudice, and no two agree as to who that person is.

It is evidently here that the vital danger of habit comes in. The mere arrest of the development of executive habituation may make a man less efficient in some walk of active life than he might have become, but that may be compensated by greater mental productiveness. The excess of mental habituation means the much more serious stifling of mental initiative, of originality. Such a mind uses executive automatism always in the same round of activities. A nation obsessed by mental habituation would be stationary in civilization, because the sterility of the national mind of necessity carries with it stagnation both of the applied arts and of all forms of spiritual culture.

How shall mental stagnation be avoided? A habit is a trend of life determined by the past. But life is also determined by anticipation of the future, for "the future has generally much more to do with our present

moods than the past.”¹ So again the answer is—by development of purpose. Our purposes, as incentives to effort, are affiliated to the propulsive force of our instincts. And that propulsion is essentially emotional. The instinct is stimulated by something in the situation and tends to deal with it in a particular manner. Full-grown purpose is a development of this complex process. With growth of experience the crude primary emotions become combined in various ways, and produce states of greater complexity according to our relations to different elements in our surroundings. They, therefore, demand more complex activities to satisfy them. At the same time, growing intelligence is gradually making clear the relation of things to ourselves and to each other. Thus, “instinct supplies an outline sketch of behaviour, to which experience adds colour and shading.”² This colour and shading give rise to purpose—the resolution to attempt to attain that which seems to be of worth.

We have seen that imitation originates activities which by repetition become at once habitual and adaptive. Throughout we have urged the presence of purpose. But the purposes which direct any one class of habits are all of the same general kind. They are feelings of the worth of one type of experiences sufficiently powerful to induce effort to realize them. Thus, such a series of purposes is a habitude. It is a trend of mental life growing little by little as the purposes widen, but marked at every stage by a characteristic form of expression—the habit of action with which in origin it was connected, by which it grows, and to which it adds growth. For, like every other form of life, a habitude grows by acting,

¹ W. J. Locke : *At the Gate of Samaria*, ch. 24.

² Lloyd Morgan : *Animal Behaviour*, p. 106.

and its activity exercises and develops the corresponding habit. So we see the force of Plato's enquiry: "Did you never observe how imitations, beginning in early youth and continuing far into life, at length grow into habits and become a second nature, affecting body, voice, and mind?"¹

There are, then, two main classes of habitudes, or life-tendencies, in each one of us. The one makes for sterility and increasing narrowness: it is a force of mental inertia. The other leads to fertility, increased breadth of outlook and of sympathy, a wider range of activities: it is essentially dynamic, urging us on to better things. These latter habitudes do not tend to keep things as they are, but they are habitual trends of mind nevertheless.

Habitudes may pass from the one class to the other. A purpose which has been pursued long enough to form a habitude may be dropped. The habitude still remains, but it acts more and more blindly. On the other hand, when intelligence tests and tries, by its effects on life, a habitude which has grown up from intercourse with others and without definite intention, it may adopt it as a general line in which purpose shall work. Then the habitude loses its inert character because it is infused with the dynamic power of purpose. It is not the origin, but the present condition, of a habitude which decides its present effect on life; though it is plain that habitudes which grew up in us unnoticed, and which owe both origin and support to the customs amid which we live, are less likely to be followed with full intention than those which grew round purpose from the beginning. Yet so many of the most important things of life—our religion, our morality, our opinions on all social

¹ *Rep.*, Jowett's trans., Bk. iii, p. 395.

and political questions—do originate in this involuntary way, that when life advances to the stage in which we are not occupied solely with the individual things of the very near present, but are able to take an increasingly wide outlook on life and see at least some of its meaning, it is surely necessary that each one of us should try to justify to himself his beliefs on these most essential matters, and if they cannot be approved, to modify or to reject them as may seem necessary. The result will be at once a principle of conduct and a sphere in which new or modified habitudes may grow.

The formation of 'general habits', such as tidiness, accuracy, punctuality, and the like, depends on the relation between habitude and habit as found in purpose. If a parent or a teacher try to form such habits from without, success will naturally be limited to the particular matter in which they are formed. The whole process is made a mechanical reaction to certain circumstances, and the reaction will be called forth only by just that kind of circumstances. If, on the other hand, a purpose be inspired, and by needful reminders kept clearly in view, then a habitude grows up which finds expression in the desired acts. But such a purpose, like all purposes, implies not only an emotional spring of individual action—such as desire to please parent, or fear of punishment—but an intellectual grasp of the value of the required habit. Certainly children differ in these matters, as in others. Especially the differences between the active and the emotional temperaments are likely to give variation both in the rapidity and in the perfection with which the habit is formed. So, when no general habit is formed it may be suspected that the training has been directed immediately to the outward act, and has

failed to attach adequate importance to the determination of conduct by purpose. It is habitude that is wanted ; then habit can be left to take care of itself. To regard habit as merely regulative of action is to fall into a similar mistake as to assume acts to be imitative simply because they look to us like other acts. Outward habit may be either a mechanical reaction or the deliberate use of executive automatism.

The question of changing any form of habituation is one of much practical importance ; for there is no human being but has both habitudes and habits which it would be well to modify or to replace. It must be noted that there can be no such thing as simply *breaking* a habit. All habituation is a determination of the direction of some part of life. We cannot cut out a piece of life ; we can only change its form. In every case, great and small, the first essential is to evoke—in ourselves or in others as the case may be—the purpose to adopt the opposed mode of thinking, feeling, or acting. This is least difficult in processes that have always demanded thought for their execution, that is, in those already determined by conscious purpose. For then we have only to substitute purpose for purpose. But when the habituation has become automatic in its whole operation, as in tricks of manner and in prejudices, a conscious purpose has to be introduced into a process from which it is absent. In the one class of activities we have always used the habituations for our own clearly conceived ends, and to these they have been essentially subordinate. In the other class the habituations have, each in its own sphere, obtained the mastery of life, and we have to awaken and originate purpose, not merely to change it.

Purpose having been evoked, the new habituation can

only grow in the ordinary way—by practice. The sooner occasion is sought for such exercise the better ; for unfilled purpose grows cold and weak. Every repetition of acts which tend towards the new habituation, it must be remembered, gives to the new purpose all the cumulative force of the growing habitude. So, too, any harking back to the old mode of behaviour must be avoided, or the old habituation is revived in all its force, and the work has to be begun over again.

Experience, then, is not simply the course of life ; it is the organization of life. Throughout we have as the two essential elements, purpose and habituation, but not unrelated to each other. Purposes, beginning in persistent imitation, are at first small and isolated. Habituation is at the same time weak and vague. As intelligence and interest in the surroundings grow, purposes draw together, become more related to each other and extend more remotely from the present. At the same time their realization requires increased executive habituation. But the persistent following of lines of purpose is creating habitudes, our relations with our surroundings are developing others. Here is possibility of mental arrest, due to a petrification of mere custom and a consequent narrowing of initiation. This, however, is not necessary. We can, by concentration of purpose, change or modify a habituation which, for any reason, is repugnant to us. Such modification still keeps the habituation in relation to the life around, but it may, to a greater or less extent, modify even the general social habit. At any rate, it will so modify it for any one who is brought within the sphere of our personal influence. So we are responsible not only for our own lives but for the kind of impulses we give to the lives of others.

The life process, as we have sketched it, is never completed. Whenever development ceases there is mental arrest. To some it comes in early childhood, to others with the senility of advanced old age. In each case there is organic defect beyond the power of the will. But in normal life the matter is within our own control. There is much both of stimulus and of encouragement in the words of George Eliot: "Our lives make a moral tradition for our individual selves, as the life of mankind at large makes a moral tradition for the race; and to have once acted nobly seems a reason why we should always be noble."¹

¹ *Romola*, ch. 39.

CHAPTER VII

DEVELOPMENT OF INTERESTS

“BODILY pains and pleasures are the unknown principles of all human actions.”¹ In these words did Helvetius, with his usual clearness and consistency, state the outcome of the theory that human life is built up of the sensations received from the surroundings. Both the ultimate hypothesis and this practical deduction from it still influence education. Formerly the rule of conduct was applied in the assumption that only by bodily pain, or the threat of it, could a boy be induced to learn his lessons. In these humanitarian days the appeal to pleasure is more fashionable. School is to be essentially a place of enjoyment; the dull and the difficult are to be banished, and a pleasant excitement is to mark every lesson. School work is to be made ‘interesting’, then children will ‘like’ it.

Old fashioned people recoil from all this. They urge that to make everything enjoyable, and to call for the doing of no disagreeable tasks, is but a sorry preparation for that later life in which everyone often has to do things he detests doing. As is usual with those who recoil from a new doctrine, they often go, at any rate in theory, to the other extreme, and practically assert that the dis-

¹ *De l'homme, de ses facultés, et de son éducation*, sect. ii, ch. 6.

tastefulness of lessons is an excellent measure of their educational value.

It may be urged that each view rests on two mistakes : one common to both ; the others complementary. That common to both is that children's activity is only determined from without : the one theory relies on allure-ment, the other on compulsion. The complementary errors are that the one fixes its view exclusively on the present life of the child, the other only on its life in the years of maturity. The discussion in the last chapter leads to the rejection of all these assumptions. Of the first because it fails to find the real spring of activity in the child itself ; of the last two because they do not recognize that experience is a continuous development.

If one ask another—"Why do you study psychology?" the answer will probably refer to some form of interest, it may be in mental life itself, it may be in an examination in which questions are set on mental life. Evidently we can call the one interest direct or immediate, the other indirect or mediate. The connexion of the latter with our real purpose is an artificial one. In each case, however, interest is given as the explanation of why the activity takes that direction rather than another.

Further, if the interest be indirect, it will not lead to the study of psychology when once the examination is passed ; if it be direct it may influence reading and thought for many years. A teacher who is interested in his pupils as children to be trained, and not simply as phonographs to be furnished with records, will always find interest in everything that throws light on their lives.

We know, however, that the students of psychology are far outnumbered by people who take no interest in that subject, and who would find such a book as this

extremely boring. This is a fair example, and it brings out that "what is one man's meat is another man's poison" in intellectual as well as in physical matters. In what interests me most I may, indeed, be quite alone. It is my own most intimate personal concern. Each one of us has such private interests, and they are his dearest possessions.

It is evident then, that neither interest nor its opposite, tedium, is a quality of the external object. Often, indeed, we speak of a book as interesting or of a lecture as tedious. But in doing so we are only transferring our own feeling to the object. Another person may, with equal justification, reverse our adjectives. Even if every reader of a book agreed that it was wearisome, there would still be one person who esteemed it interesting—the author. With real qualities of things it is different. Everyone with normal senses asserts a shilling to be white, circular, and flat. But the judgement of interest is not thus dependent merely on the presence of what may be called the appropriate intellectual organ. It is true that to find a book interesting we must have sufficient knowledge to understand it; but it is not true that we find interesting everything we have sufficient knowledge to understand. If we lose our interest in a subject—and we all have had experience of doing that—we do not then and there lose the knowledge we have of it. I may know now all I ever knew about kite-flying, and yet no longer desire to fly a kite: my interest in that pursuit is dead.

It follows that the idea that lessons can be in themselves interesting or wearisome rests on an inadequate analysis. Of course, a heavy manner, a dull mode of speaking, a muffled enunciation, are favourable to the

*I knew I wasn't
cleaning my nails for nothing!*

development of tedium, as their opposites promote alertness. They act on the dim background of consciousness, and help or hinder in inverse proportion to the strength of the interest. If that be strong these are ignored. But if a teacher trust to a bright manner and amusing illustrations he is likely to find that the substance of the lesson has led to no thought, that is, has aroused no intellectual interest. Certainly a teacher may be able to choose lessons that are likely to rouse interest in all the members of his class. That comes from knowledge of *them*. So that when this is the case it is not the lesson that is made interesting but the class that is interested. And when children say they have had an interesting lesson they of course mean that it interested *them*.

If interest is not a quality of the object, neither is it an attribute of our own minds. It can only be found in a relation between the two. Everything which in any way comes into our consciousness is part of our environment, but we are not interested in it all. The test of interest is that we dwell on the object ;' and we neither do nor could dwell on everything. Is, then, this relation to be found in the pleasure or pain the objects give us? Are we interested only in what immediately pleases? If so, the teacher who tries to arouse interest through pleasure is right.

Let us look at the case of a boy trying to make a toy air-ship. Every step in the construction is of interest to him because it leads to the fulfilment of his desire, the accomplishment of his purpose. He nails and pastes, not because nailing and pasting are in themselves delightful, but because without nailing and pasting the air-ship cannot be made. Does he desist because he bruises his fingers with the hammer or cuts them with knife or saw?

Does a first failure daunt him, or does he start again to repair his mistake? Does he, in fact, bother his head about the quality of the sensations he is experiencing? Or take a boy who is interested in the collection of certain water-plants. Does he object to getting wet and muddy? Yet these are in themselves unpleasant; he enjoys them, not because of what they are when estimated alone, but because they are parts of a whole experience which he does not split up in his mind any more than in his actions. Do scratched fingers stop the gathering of blackberries? Yet not the most hardy boy would say that he really likes scratches, or would spend his time in deliberately and in cold blood inflicting scratches on himself.

Examples could be multiplied indefinitely. But we need not elaborate the matter. We all know that in the pursuits each chooses for himself it is the purpose which not only directs but supplies the energy. It may be in the background of consciousness, but it governs the line of conduct, and the sense that it is being gradually attained spurs on to further and continued efforts, which give joy in proportion as they are successful with reference to just that end. Whether this or that portion of what has to be done is in itself pleasant or unpleasant matters not at all. It is not considered by itself because it does not exist for us except as part of the whole process. It is in that, as an expression of the self doing what it desires to do, that we delight. Remove the hard parts, indeed, and you often take away most of the zest, as when a boy is interested in climbing a cliff to gather sea-gulls' eggs. One of the real joys of his life is to conquer difficulties, and the more pain the conquest costs the more he rejoices in it. No one who knows children could so

libel them as to maintain that they are wholly, or even mainly, determined in their actions by the physical pain or pleasure those actions bring. Indeed, it takes many years of consistent practice to produce a well-developed egoist.

I suppose everyone would say that a child is interested in such pursuits as have been mentioned. It follows that this interest has no necessary connexion with pleasure. Its relation is to purpose, and when that is strong the child is interested in all that relates to it and helps to its attainment. The test of his interest is his readiness to put forth effort. If this be the case the evoking of interest, so far from being antagonistic to the development of the power to do the distasteful is actually the only way in which that power can be developed in the child's own soul. Mere outward compulsion to do the unpleasant does not arouse any purpose, unless it be the purpose to avoid it as much as possible. To awaken interest in something which can only be attained by doing the unpleasant is the only way to inspire subordination of pleasure and pain to the higher needs of life. And the subordination is more easily made because the sense of conquest over difficulties is itself a higher pleasure than any derived from the senses. "Work while work pleases you. Love it for its own sake. Set a great end before you; but the attaining it is the delight, not the ultimate attainment. If you think of nothing but the end, the reaching of it is all feverish unrest and toil."¹

This conception of the absence of necessary connexion between interest and pleasure is borne out by the uses of the word in ordinary life. To take a few examples—"It is to his interest to keep on good terms with his

¹ W. J. Locke : *At the Gate of Samaria*, ch. 7.

employer, though he hate him." "Pitt had the interests of his country at heart." "The monied interest is at times opposed to the landed interest." "Compared with discipline, details of curriculum are matters of subordinate interest." "He is much interested in social reform." "To love one's native country...to be interested in its concerns is natural to all men."¹ "I should be glad...to see you take a little more interest in duties which you may be called upon to discharge."² "The mother awaited with breathless interest the doctor's report on her sick child."

The shades of meaning are very various, but through them all runs the original force of the Latin word—that which concerns us or is of importance to us in some way. But the idea of pleasure is either absent altogether, or present only incidentally and in a subordinate degree. This is bound to be so, for the ways in which things and events concern us are by no means always pleasant. If I met a tiger prowling along a country lane I should be interested in his movements, but the interest would not be that of calm enjoyment. No doubt a spy about to be shot is interested in the proceedings of the soldiers who are preparing to carry out the sentence. A man who suspects that he is suffering from ptomaine poisoning is interested in his symptoms and in the doctor's report on them. In neither case would any but a lunatic assume pleasure as the basis of the interest.

We really come to this—that things and events may concern us in every aspect of our possible relations to them; and so may be of any and every emotional value to us. So it may be said that we are interested in whatever raises in us any emotion. Of course, the emotion

¹ Dryden.

² Lytton: *My Novel*.

is not the interest. I am interested in a case of misfortune which rouses my sympathetic pity, or in a lawsuit in which my anger at another's conduct towards me is finding expression. But the emotional value the object has for me leads me to think about it and to act in relation to it. Similarly a boy is interested in the temper of a teacher whom he fears, and his interest may lead him to learn a distasteful lesson.

In all such cases it is plain that there is an intellectual element in the interest. If the emotion be so strong as to carry us away—as in a violent burst of angry passion, or of despairing grief—the whole consciousness of the relation is absorbed into the emotion. Then the value of the experience is not recognized, for there is no room for judgement. A man, for example, often declares quite honestly that he is not angry, when it is obvious to the onlooker that he is in a bitter rage ; and deep grief may for the time blot out all surroundings. Then thought is in abeyance, or rather is overshadowed by emotion.

All emotion prompts to action of some definite kind. Thus it follows that when we are interested we act, and that the kind of action depends not on the mere fact of interest but on the kind of emotional value the thing in which we are interested has for us. Vague objectless activity implies indifference, which is the absence of any one interest. To be interested, therefore, means to be urged from within to some course of action with reference to the object which interests us. If the interest be one of fear, as when one meets a tiger, the activity is flight ; if that be out of the question, as with the boy and his stern teacher, the activity is preventive ; if it be one of pity, the activity is benevolent ; if it be one of curiosity, the activity is enquiry. In every case, the conduct is

determined by the emotion in relation to the circumstances in which the act must take place.

The prompting of emotion takes shape in desire. To desire is to want—to recognize a need and to imagine a means of satisfying it. Desire grows out of instinct and appetite, and is at first quite indefinite in its outlook. The baby feels the need and seeks about for the means of satisfaction with no guidance except the experience of past satisfactions. It is only, then, as experience becomes definite, and understanding of the relations of our surroundings to ourselves is attained, that desires become clear as to their objects. Now, desire is necessarily an intensely personal feeling; consequently, the natural outcome is for us to identify ourselves with it by resolving to act upon it. Sometimes we do not act because several desires, incompatible with each other, are at one and the same time urging us in different ways, as when a boy at once desires to play a game of cricket and to finish his home lessons. Till one or the other receives his adherence he loiters about doing neither. Some people have so many incompatible desires of practically equal strength—or weakness—that they seldom do do anything. They spend their lives in making up their minds, and when they have come to a decision it is usually too late to act upon it.

To desire anything is evidently to be interested in it, for we only desire what we believe to be of value to us. The emotion of anger, for instance, may prompt one to desire to do a certain injury to the person against whom the anger is felt. The desire to keep out of a quarrel and to live a peaceful life, which may arise from simple self-love or from remnants of affection towards the offender, may oppose the first desire. Then comes

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deliberation or vacillation till one decides to follow one desire and to reject the other. The attainment of the object of the desire chosen is now made a purpose, that is, it becomes the aim of endeavour.

- ✓ It is seen, then, that purpose, desire, and interest are connected. We desire only what we esteem good, and we take as purpose only what we desire. When the purpose is formed, everything connected with it is interesting to us, just because only through knowing it can our purpose be amply gained and our desire sufficiently satisfied. Let us examine an example. I desire to go to live in Italy. It may be because I believe the climate will be more agreeable to me than that of England, or because the artistic and historical associations of Italy attract me. For a long time the desire may be ineffective, for circumstances may make it impossible to give effect to it. Yet it is a real desire if its accomplishment only await the removal of those extraneous hindrances. If really there be no intention to go when occasion does offer there is no true desire but only a kind of day-dream, intended to find such satisfaction in itself as one may find in living through a romance. All the time the purpose is in abeyance, everything which concerns Italy is of the greatest interest to me. I shall read eagerly books which deal with the country, its people, its art treasures, its archæology ; indeed, all that belongs to it. All this has a personal tone quite different from what the same matters would have if I were not proposing to go to live in the country. In that case the whole interest would be intellectual and impersonal, and the purpose simply to increase knowledge ; in this it is practical and personal as well, and the purpose affects my whole life.

Evidently, too, in the latter case many things will be of interest to me to which in the former case I should be quite indifferent.

The consideration of an instance of this kind brings out the relation of interest to habitude. When a purpose affects a wide stretch of our lives, and especially when its fulfilment is possible only in the future, our thoughts often dwell upon it. This develops a habitude of thinking on that subject. When the purpose, though it can only be accomplished in the future, is yet being gradually fulfilled in the present, as in writing a book, evidently the habitude is more quickly formed and more frequently dominant when it is formed. Everything then is looked at from the point of view of the work in hand, and interest often finds relations between it and pieces of experience that at first sight would seem far removed from it.

In our first example we saw that the connexion of interest with purpose may be direct or indirect. It is the former when the means in which interest is taken are of the same nature as the purpose, so that the fulfilment of the purpose is the natural outcome of the means. If one's purpose is to understand children the natural means to adopt is to study them, and anything which is helpful in such study is directly interesting. If one is going to live in Italy all that bears on Italian life is directly connected with the purpose. If a boy desires to make a successful air-ship the parts of physics that help him are directly interesting to him.

On the other hand, if one reads a book on physics in order to pass an examination the interest is indirect. The examination might with equal facility have induced a study of geology or of old English literature. There

is no desire to learn the subject because it will throw light on a part of experience. The real purpose is to pass the examination, and the student will do the least which he believes sufficient. Of course, it often happens that a subject taken up for such an extraneous motive shows itself of value. Then interest in it awakens; the direct purpose is born, and exists side by side with the indirect till the examination. Afterwards, if it be of any strength, and worth calling a purpose at all, it still guides reading and thought.

Now it is certain that in life we have to do a good many things in which our interest is only of this indirect kind. When a man works to earn a living the purpose of securing remuneration for his work is artificially connected with the work itself. The art of the shoemaker aims at producing shoes, that of the doctor at curing or preventing sickness, that of the schoolmaster at developing worthy citizens. When this direct purpose is present, well and good: there is direct interest in the work as well as indirect interest in it as a means to securing an income. But if the latter only be present there is no joy in the work itself, and it is degraded to mere drudgery.

Even when the immediate interest in the work is strong there are sure to be many portions of the day's task which are not naturally connected with it, and yet which have to be done. The doctor has to listen with sympathy to the querulous complaints of a wealthy patient who imagines himself ill; the schoolmaster has to go through routine duties which have no bearing on the education of his pupils. In all such cases we are much helped by the general habitude of doing what comes in the day's work without too much enquiry as

to how we like it. Naturally these extraneous tasks do not furnish occupation for our leisure time: if, for instance, a schoolmaster marks exercises out of school-hours he will doubtless agree that the hours devoted to that work, whatever they may be in scholastic theory, are not in fact leisure hours.

Now, suppose we apply these considerations to the young. Evidently the habitude of taking calmly all that comes in the day's work is not so strong with them as with us. Yet it should be forming, and school should help to form it. It is clear that if a direct interest can be aroused in a subject the teacher need not be careful to remove difficulties, though he must see that they are proportioned to the strength which is to deal with them. Nor need he try to add adventitious attraction to the dull places: an increase of vividness in the purpose is much more effective. Further, direct interest should be aimed at in all school work. "For getting a fine flourishing growth of stupidity there is nothing like pouring out on a mind a good amount of subjects in which it feels no interest."¹ But any subject may fail to arouse direct interest in some of the pupils, and some subjects, which yet for good reasons should be studied, may not rouse such interest in any. The children must not therefore be allowed to neglect them. In these cases appeal must be made to the indirect interest of fulfilling such purposes as doing one's best, pleasing one's parents or teacher, winning distinction, not hindering one's class, and even avoiding punishment. The more real and positive such indirect purposes are the better. So, merely to avoid punishment is much the least desirable of them all. Even when direct interest exists some of

¹ George Eliot: *The Mill on the Floss*, Book v, ch. 2.

these indirect interests are a great help, and the younger the child the more he needs them. Can any one of us dispense with them altogether?

To be interested is to feel that some object or class of objects has a value for us, and on that account to be prompted to act in accordance with that feeling. Interest does not create activity but directs it; it decides which parts of our surroundings shall occupy our lives, and which parts shall be relegated to obscurity. Consequently, in seeking the chief types of interests we must not only examine the form of activity to which each prompts but the kind of objects with which each deals. The former consideration is primary, for in it we find the value of the interest to our own lives; but the latter is also important, as it controls the actual filling of those lives.

The broadest division of our environment is into men and things, and that will be sufficient for our purpose. Our relations with both men and things are always such that we know something of the object, it has a certain value for us, and, in consequence, we act—or refrain from acting—in reference to it. One or other of these aspects may be prominent in any one action; and one or other of them may dominate any one life. Hence we get the distinction of practical, intellectual, and emotional temperaments. Hence also we may divide interests into practical, intellectual, and emotional. A life in which one or other of them predominates shows by that fact that it belongs to the corresponding temperament. Indeed, there is no other way of determining temperament than by reference to prevalent interests. Because of the inborn temperament the interests are felt; because the interests lead to certain types of acts we know the temperament.

A practical interest asks—What is the use of it? an intellectual interest—What does it mean? an emotional interest—What is its worth in itself? So, with relation to things, the first leads to all forms of invention and useful contrivances; the second to the increase of knowledge; the third to the development of all forms of art. In relation to people the practical interest is concerned with their relations to oneself; the theoretical or intellectual interest with their relations among themselves as seen in laws, institutions, customs; the emotional interest with the intrinsic nature of their moral and social state. The religious interest includes all the others. In its highest form its centre is emotional and shows itself in love and awe, while the intellectual interest of understanding the divine mysteries, and the practical interest of one's own individual salvation or damnation are subordinate.

In the practical interest knowledge is not sought for its own sake, but for the use which can be made of it. It is not at all that knowledge is despised. On the contrary it is highly valued—but always as a means to something else. Without increase of knowledge practical interests are confined to the repetition of the past. So, till some two centuries ago men had made little advance in two thousand years in the adaptation of material things to their needs. While the search for knowledge was confined to the world of thoughts and beliefs its results were of no avail for dealing with the things of sense. With the growth of knowledge of the physical constitution of things the practical mind has been able to invent means of utilizing natural forces. These could only be used when they were known, and every machine is simply a contrivance for combining

natural forces which all work in their own way. Man's power to do depends on his knowledge.) Further, every new mechanical contrivance starts with knowledge of its predecessor. Invention is built on invention, which means that the starting-point for every new machine is the less perfect machine. Even the first machine of a kind grew out of knowledge of contrivances more or less similar in function and in construction. Anyone who will compare an early type-writer with a type-writer of to-day will see the advance made in a very few decades.

The following example is as typical as it is striking—

“All the world knows by this time that the great Cunard liner *Maurétania* left Liverpool for New York on Saturday evening with the hope and intention, if human skill and labour can achieve the feat and are not baffled by the uncontrollable vicissitudes of weather, wind, and sea—as it now seems not unlikely that they will be—not only of reaching New York to-night, but of reaching Fishguard on the return voyage on Thursday, December 22—that is, on the twelfth day after her departure from Liverpool....

“She will carry 1,100 passengers out to New York and 1,800 back to England. As her normal ship's company consists of over 800 persons and she has shipped an extra number of firemen, it follows that she will carry some 2,000 persons in all on her outward trip and nearly 3,000 on her return. In order to accomplish her task she will have to steam across the Atlantic and back at an average speed of 26 knots, or to travel between 600 and 700 nautical miles a day, and her coal consumption will be about 1,000 tons per day, probably rather more than less. The earliest steam Cunarder to cross the Atlantic was the *Britannia*, built in 1840. She was a

wooden paddle steamer 207 feet long, which is less than two and a half times the width of the *Mauretania*, with a gross tonnage of 1,154 tons, as compared with the *Mauretania's* 31,938 tons, and an indicated horse-power of 740, not much more than a hundredth part of that of the *Mauretania*. Her cargo capacity was 225 tons, and she carried 115 cabin passengers. Her average sea speed was 8.5 knots, and her coal consumption was 38 tons per day. The evolution of less than 70 years is here very vividly exhibited."¹

The essence of the practical interest is, therefore, not that it does not seek knowledge, but that it seeks it for ends beyond itself. The purpose is to do something; to that everything is a means. It may be only an indirect means, for we may be unable to alter that of which we have knowledge, but only to determine our own action. For example, we seek knowledge of the weather in order that we may regulate our goings out and comings in, or if that be not in our power, that we may at least make suitable provision against rain or snow. Thus, within a practical interest there may be an intellectual interest to know. Really the knowledge is needed for the practical purpose, but it may be seen to be so essential to that purpose that its attainment becomes a subordinate end in itself. Then the practical purpose is put aside for the time, and energy is thrown into the theoretical interest. Often, perhaps generally, both practical and intellectual interests are excited by the same object, though either may be so dominant, either always or at any one time, that it obscures the other.

Practical interest in its most exaggerated form is seen in the desire to use the results obtained by the intel-

¹ *The Times*, Dec. 15th, 1910.

lectual work of others as mere formulas, without any real understanding of them. This, indeed, defeats its own object, as there is no flexibility about such borrowed summaries, and for all original practical work adaptability is essential. So this kind of practical person is the man of prejudices and rules of thumb, the convinced lover of 'red-tape', the fine flower of bureaucracy.

In social life the practical interest is concerned with our relations to others and with their relations to ourselves. It has, thus, an element of egoism. But it is not necessarily selfish in the narrow sense. It is founded both in the instincts of self and in those which relate to others. The interest may be that others should think well of one, should love one, should trust one. Such practical interests are, we hope and believe, more common and more powerful among children than the narrowly selfish interests of gaining reward or avoiding punishment. In these, indeed, the reference is not only to persons but subordinately to things.

We have considered the working of practical interest in adult life where its effects are most obvious. Its nature is the same in children, though the objects to which it is attached, and the productions to which it gives birth, are different. We have seen that it prompts to the doing of something with the hands as well as with the head; that it learns in connexion with such bodily activity; that learning seems of worth just because it leads to making. I do not anticipate any contradiction when I state that this is the characteristic attitude of childhood. But if that be granted the conclusion to which it leads is that children will learn best when their learning is part of a practical activity. It is true they have the instinct of curiosity which prompts them to

ask questions and makes them ready to hear about things outside their experience. Even these they delight to act, and within their immediate experience curiosity works hand in hand with constructiveness. That which satisfies both instincts is of more educational worth than that which gratifies only one. The influence of an **exaggeratedly intellectualistic adult psychology on the training of the young** could hardly be more plainly shown than in the practical assumption that the interests of children are predominantly theoretical.

Not only psychology but physiology teaches this same lesson. Youth is the time for the organization of nervous circuits, and if they are not formed then they either cannot be formed at all or they are imperfectly formed and that with much difficulty. Further, it is established that the large regions of the cortex which are primarily concerned with the control and movements of the limbs are intimately connected with those which specially subserve intellectual operations. If either be inadequately cultivated the other also suffers. So that exclusive devotion in school to intellectual pursuits defeats its own ends, not only directly as failing to arouse the most characteristic interests, but indirectly as arresting that elaboration of cortical connexions from which intellectual development cannot be separated. That this is not mere theorizing has been proved by definite experiment. In an address to the Scottish Sloyd Association,¹ Sir Harry Reichel gives the following—

“Cheetham’s Hospital is an old endowed Bluecoat School of the higher elementary type. Mr. Mather, who was on the Governing Body, paid a visit to the United States, and was greatly impressed with the

¹ May 28th, 1909.

manual work carried on in the common schools. On his return he proposed that something of the same kind should be attempted in Cheetham's Hospital. To this both Governors and staff presented a united front of opposition. The former regarded it as a fad. Boys went to school to read books and become clever men, not to waste their time whittling wood. The latter protested that the school time-table was as full as it could hold, that they had to satisfy H.M.'s Inspector, and that if anything further were introduced, they would not be answerable for the consequences. The position seemed hopeless enough. Mr. Mather, however, did not lose heart. He asked that an experiment should be made for one year, of which he would bear the whole cost himself. He would build the necessary workrooms. Let half the boys go on as before, and the other half spend four hours a week taken from the ordinary school hours in systematic Handwork. At the end of the school year let all be examined in the book subjects; then if it should appear that those who had done the Handwork were seriously behind their companions in the book subjects, he would admit that Governors and staff were right, and would clear away the workrooms and plant at his own expense. So fair and public-spirited an offer it was difficult to refuse. The workrooms were built, and the dual curriculum was carried on for a year. At the close came the test examination, and then it appeared not only that the boys who had devoted four hours less a week to book study were not behind the others in any of the book subjects, but that in the Mathematical part they were markedly in front of them, more particularly in Geometry. The experiment was crucial and decisive. Handwork has ever since been an

integral part of the curriculum of Cheetham's Hospital. A year or two later I visited the school, and was shown round by one of the masters, who enthusiastically confirmed the account I had received. 'We masters,' he said, 'were entirely opposed to it at first; but now we regard it as our best friend.' We were passing through the woodwork room at the moment; he picked up a piece of wood which had been cut to the shape of a triangle. 'You see, sir,' he remarked, 'a boy who is constantly making shapes like this gets a much clearer idea of what is meant by an angle and a triangle than one who merely looks at figures in a book.' 'In short,' I said, 'it may be regarded as a kind of laboratory practice in Euclid.' 'Indeed, sir, that's just about what it is.'"

It may be noted next that the only interests which can be indirectly connected with purpose are practical. Of course, if the purpose be to make a box or to cultivate a garden successfully, the interest in all the activities that lead to the desired result is direct, and the interest in the pertinent knowledge is so extremely closely connected with it that only theoretically can it be looked upon as indirect. But unless a direct intellectual interest can be aroused in ordinary lessons the purpose itself is external, and the interest even in it is only indirect, and takes the practical form of avoiding reproof or securing the approbation either of another or of one's own conscience. It has already been granted that such interests cannot be banished either from school or from life. That, however, is quite another thing from consenting that they should be given an artificial dominance. Moreover, let it not be forgotten that a school which cordially welcomes a child's real interests will secure his good will

in those tasks in which such natural interest is not felt much more than will the school which ignores them. Nor is this a small gain.

Interest is intellectual when the purpose is to know all we can about that part of reality. The interesting object will be studied both in its qualities and in its relations to other objects. As knowledge increases the interest is more and more in wide and abstract relations, and it is then that it is most appropriately termed theoretical. This is a distinction due only to the kind of object to which the interest is attached. From the standpoint of the mind which feels the interest there is no such difference. The aim is to reach the truth.

Theoretical interest differs from practical interest not in its objects but in its purposes. Questions of utility, whether wide or narrow, do not concern it. That some practical inventor may make use of his discoveries is neither here nor there to the man whose interest is essentially intellectual. As men are never merely pure intellect, however, they cannot be confined to really theoretical interests. Just as the practical person must have enough interest in knowledge to obtain that which is instrumental to him, so the lover of abstract truth must have regard to mundane considerations. In most cases his interests are probably somewhat mixed. He may desire to advance knowledge, but he may at the same time be by no means oblivious of the fame or wealth it may bring him. If the latter be really dominant, then his interest is essentially practical, though at first it looks as if it were theoretical. His intellectual pursuits are means to an end ; they are not followed for their own sakes. Few men in any age are like Brown-

ing's typical Renaissance scholar who "decided not to Live but Know"—

"Let me know all ! Prate not of most or least,
Painful or easy !"¹

If this be so with adults, what can be expected with children? The argument is not that they are incapable of purely intellectual interests, but that it is very exceptional, if not quite unknown, that such interests should be the chief things in their lives. So the common scholastic experience is that extraneous incentives are needed in most lessons, and that even then the result is no very startling exhibition of zestful energy.

Let it be noted, too, that intellectual interest can be but scant till it has a fair amount of knowledge already acquired on which to work. It concerns itself with the more hidden qualities of things and with their systematic relations. It is consequently an interest that we should expect to grow with the child's growth. But it must grow out of the true seed. That is where schools so often go psychologically wrong. They are apt to assume that if you want a mental process to be operative in youth or manhood you should begin practising just that form of process in childhood. That implies that the child starts with fully competent faculties only needing exercise, whereas he starts with a few indefinite instincts which in practice branch out into many more complex and more mature forms. The surest way to secure intellectual interest in later years is to let it be the flower from the root of practical interest.

The different modes in which the theoretical and practical interests regard the same object may be illus-

¹ *A Grammarian's Funeral.*

trated by the following problem culled from the mathematical columns of *The Educational Times*¹—"Two men wish to buy a grindstone, 42 inches in diameter, and 1 foot thick at the centre. To what thickness at the outer edge should the stone uniformly taper from the centre, that each man may grind off 18 inches of the diameter and both have equal shares, the central 6 inches of the diameter being waste?" It may safely be assumed that no two workmen could be found on earth who would desire to perform the suggested operation. The interest is purely theoretical. Such an example may bring home to teachers the truth that the mere clothing of a mathematical problem in concrete terms does not make it a concrete—that is, a practical—problem.

That the intellectual interest develops gradually in life is evident when we consider its reference to people. It begins in the child's interest in his mother and others closely connected with him—an interest springing from love. Here it is inextricably combined with the practical interest in the effect of their actions on himself. Still it is there, and will imperceptibly blossom into interest in wider circles as the more complex forms of sympathy develop from the simpler kindly emotions. In its developed or theoretical form the object of the interest is essentially the relations of men to each other as shown in institutions, customs, laws, wars, treaties. It is the root of all taste for history and geography.

The severely theoretical interest in institutions of the most scientific historian or publicist, then, originates in personal interest in those in close relation to us. The development from the one to the other is gradual and continuous, and is both the child and the parent of

¹ April, 1910.

advanced knowledge. A small boy entering a boarding school, and finding the rules and regulations of unexpected strictness, will probably infer that the head master is a "grumpy old beast". His interest in institutions still concentrates itself in a person, and is still bound up with his practical interest in the way those institutions are likely to affect himself. So, too, a boy or girl is much more likely to obey rules when the weak academic interest in them is strengthened by a more powerful personal interest in the teacher. In that case the personal interest in the consequences of infringement is much less brought into play, and development towards breadth of social outlook is so far helped.

We see, then, that both practical and intellectual interests lead directly to activity. In the former case the activity is primarily bodily but is guided by intelligence, which must attain the knowledge necessary for the purpose, and which in the course of the activity itself increases that knowledge. For it is impossible to have dealings with any part of our surroundings, human or material, without learning something about it which we did not know before. Such knowledge whets curiosity and so prompts to further activity for its satisfaction, and this further activity, though it may involve dealing with material things, is essentially intellectual. This is by far the most usual origin of the intellectual interests. We may not be able to trace some particular intellectual interest to union with a practical interest, but that is because it goes back to very early life. The baby's theoretical interests are all bound up with practical interests.

The most highly developed theoretical interest also involves incidentally some bodily activity. The scientific discoverer works in his laboratory, the

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student of humanity in his library. But these practical activities are altogether subordinate and ancillary. Conversely, in the life of the narrowly utilitarian the intellectual activity is incidental. That, above all, education should strive to prevent by the cultivation of real intellectual interests. It is because we esteem such interests highly, not because we fail to appreciate their importance, that we urge that practical interests should also find scope in school, in order that the intellectual interests themselves may be developed naturally, and so be more likely to attain their full strength than if they be prematurely cultivated in a barren soil.

By emotional interests we mean those which induce absorption in the object itself without directly prompting to any practical or intellectual activity. The term is not a happy one because, as has been seen, there is a fundamental element of emotion in all interest. The most typical form of this interest is the artistic, though it is not the only one. In contemplating a work of art one gives oneself up to it, and its beauty fills one's whole being. The mind is not passive; but its activity is receptive and responsive, not originaive or directive, as in the other forms of interest. The tendency of such a preponderance of emotion is to inhibit as far as possible the working both of intelligence and of activity. We do not think beauty, we feel it. No doubt, a love of pictures may prompt us to study art. Then we have a practical interest working through intellectual means towards the related purpose of a fuller appreciation of pictures. The result may justify the effort. The art-interest may be increased by the additional knowledge so long as this latter be kept in the background. Suppose, however, that the artistic study develops an

intellectual interest in pictures. Then, in looking at a picture the two interests may clash. For in so far as the intellectual interest is present it prompts to analysis and criticism, and this attitude is incompatible with that full giving up of ourselves to its value for us as a whole which is the true form of artistic interest.

Similarly with music. A knowledge of the structure of a symphony may increase a musician's aesthetic enjoyment. But if in hearing it the mind spends itself in analysis there will be little artistic interest.

In literature, intellectual interest can never be entirely absent, though artistic interest may be quite wanting. To have some understanding of a passage is a necessary condition of appreciating its beauty, but enjoyment of beauty need not accompany intellectual comprehension. Indeed, much literature appeals mainly if not quite wholly to the intelligence. When, however, as in poetry and reflective prose, an appeal is made to emotion and imagination, the two interests are more or less in conflict. In reading a romance, for instance, a person whose intellectual interests predominate is inclined to omit the reflective and descriptive passages—in which, probably, the author most fully poured out his soul—in order the more rapidly to satisfy his intellectual interest in the development of the plot. When very strong such interest suggests looking at the last pages of a book “to see how it ends.” People thus inclined seldom have any great love for poetry or for any prose which does not deal with facts and events, real or fictional. On the other hand, emotional interest would linger over just those passages, and delight most in those books, which in the former case were treated as negligible. This, too, is why it is that one enjoys such literature more and

more as one becomes more and more familiar with it. A passage committed to memory no longer rouses intellectual interest, so the emotional interest has full liberty. We give ourselves up to the pure enjoyment, without effort to understand because now we understand automatically, in the same way as we may yield ourselves to a glorious picture or a noble piece of music.

The emotional interest, indeed, is very jealous. To be fully felt it must reign for the time alone. The mind must be able to rest content in the presence of the object as a whole without enquiry as to its composition.

It is evident that such an interest is quite individual.

Two friends may enjoy the same work of art and may converse about their enjoyment. But the pleasure of each is unshareable with the other. The conversation expresses rather an intellectual than an emotional interest though emotional interest may have dominated their contemplation.

As an emotional interest may lead to intellectual activity in its own service so it may in the same indirect way prompt to practical activity. While we are enjoying a work of art the only practical interest is the inhibition of disturbance and distraction. We would resist all that would intervene between us and our enjoyment. But if the object excite not admiration by its beauty but repulsion by its ugliness, the emotional interest prompts to active measures for its removal. And, of course, it is the same general kind of interest in each case, though the one is the antithesis of the other. This furnishes another illustration of the truth that interest is not a quality of the object; for nothing is more proverbial than differences in estimates of beauty.

In many cases emotional interest prompts to effort to produce like objects of emotional value. Thus delight in some form of art stimulates a child to learn to draw and to paint, to mould figures in plastic clay, to sing or to play on some musical instrument, to read or recite with elocutionary power. If the effort promise to yield but little fruit this derived practical interest soon decays—though the emotional interest may remain strong—and vain indeed is the attempt to galvanize it into artificial life.

A further way in which an emotional interest may prompt to practical activity is in incitements to search for the desired objects. A love of pictures may lead to a resolution to visit Italy, an interest in ecclesiastical architecture may give a sufficient reason for a long walking-tour. That, again, is a practical interest having as its purpose the satisfaction of aesthetic interest. The latter can only be experienced in the presence of the pictures or the churches, or in dwelling on them in imagination.

In relation to persons the emotional interest attaches to moral qualities. These excite admiration or abhorrence, which are the characteristic colourings of the aesthetic interest. At first such qualities are known only as found in persons. Later they may become detached and idealized. Of course, an interest which leads to justification or criticism of moral principles is not emotional but intellectual. The emotional interest spends itself in its attraction or repulsion towards the quality or the principle as it is. So it is the very core of the religious interest, though in that case it is not this or that quality or principle, but goodness and beauty and intelligence combined in a Divine Person, that is the

object of that interest. Its full development is seen in the rapt contemplation of the religious mystic—a contemplation conscious neither of will nor of thought, but only of an ecstatic absorption of the whole being into the Divine being.

The emotional interest in things appears in early childhood in the delight of the child in striking colours, pleasant sounds, bright lights, sweet tastes, and so on ; while his emotional interest in persons is shown in his fits of abandonment to his love for his mother. From these humble beginnings some can advance further than others. That is essentially a matter of original endowment. Some men never become capable of a higher emotional interest than the appreciation of a good dinner ; some women cannot rise above the latest fashion in dress. How much of such defects are due to original lack and how much to defective training it is impossible to say. Certainly an education which limited itself to the intellectual and practical interests would be lamentably incomplete.

Their importance in life make the practical and theoretical interests essentially those of work, while, as subserving our enjoyment, the emotional interests may be looked on as those of play, or of the leisure time of life. Of course, in the hands of creative artists the artistic interest finds vent in real productive activity. The interest in the activity itself is practical, the end is the realization of an ideal the contemplation of which will give the highest pleasure. But it is in relation with the development of appreciation that the ordinary school sets itself to supply scope for artistic interests. It can do little more than supply material, and by suggestion draw attention to it. The bond of union between the

soul and the beautiful object must be formed spontaneously ; there is no forging it from without.

We are led, then, to this : that an education worthy of the name must call forth every class of interest, and must provide suitable material for its exercise. The neglect of any one means a defective life. To emphasize one class of interests because they are the strongest in the life is justifiable, provided that the others are provided for according to their strength. To do more—to concentrate in boyhood and youth on some one special field in which one class of interests may work—is utterly indefensible. The premature specialization to which the great division of labour in all branches of learning is leading is nothing short of disastrous. Certainly we need culture in relation to surroundings, for only in relation to surroundings can interests grow. But this does not mean exclusive, or nearly exclusive, devotion to the pursuits of the neighbourhood. Wherever a person lives, he is related by direct and indirect ties to all the world. Any part of it may enter into his environment through the gate of imagination. This enlargement of the realm of interest, which is especially the work of the school, is a necessary means to the thorough understanding and appreciation of the home surroundings themselves. We know nothing by itself, but only in relation to other things. As the home knowledge is the foundation on which knowledge of what is outside that range must be built, so knowledge of the latter gives fullness and meaning, and so adds interest, to the former. Every one who has travelled in foreign countries will appreciate the force of these considerations. Those who cannot travel in the body must do so in the spirit.

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The educational problem, indeed, is the enlargement and systematization of interests. To the extent to which inner connexion is attained the outer life shows as distinctly purposeful. An extreme instance of thorough unification of interests is Dr Conan Doyle's well-known creation, Mr Sherlock Holmes. The whole of life is there represented as dominated by the interest of solving problems of human conduct, especially those connected with crime. Every kind of information which had no connexion with that was dismissed from the mind. So we have a list of Mr Holmes' acquirements which without the knowledge supplied by his purpose appears motiveless in its eccentricity. "Philosophy, astronomy, and politics were marked at zero.... Botany variable, geology profound as regards the mud stains from any region within fifty miles of town, chemistry eccentric, anatomy unsystematic, sensational literature and crime records unique, violin player, boxer, swordsman, lawyer, and self-poisoner by cocaine and tobacco."¹ This main interest operated by its general determination of conduct, and found expression in the special interests of particular cases. Each of these in turn absorbed the whole mental energy, to be dismissed when the solution had been reached.

Similarly, the interest of a barrister or of a doctor in particular cases is a special manifestation of the general professional interest in law and medicine. Certainly the whole of life should not be governed by one professional interest. Even Sherlock Holmes sought relaxation in his violin and in cocaine injections. On the other hand, unless the various classes of operative interests be connected together in this typical way life will be desultory and ineffective.

¹ *The Five Orange Pips.*

Interests can only grow in the environment, so that if, when they ripen a child's natural activities do not find appropriate and varied opportunities to give them full scope, development will be arrested or narrowed. It is, therefore, of the first importance to know the kinds of interests a child instinctively feels at successive periods, and the key to this knowledge must be sought in his actions.

The doctrine of evolution seemed to open an attractive prospect of studying the development of the child on a wide and extended scale. May not each child's life be assumed to recapitulate in brief the mental history of the race? Certainly our instincts are inherited from our forefathers. But they mature in our own lives, in our own surroundings, and express our own needs. By fixing on some of a child's activities and ways of looking at things a superficial resemblance may be found to some of the actions of savages or backward races. The vast majority, however, of the acts and thoughts both of the child and of the savage are perforce omitted from the comparison, for it is evident that the child, simply because he is a child with some of his most powerful instincts as yet undeveloped, cannot in all points resemble an adult savage. A child's playful forages bear no essential resemblance to the hunting expeditions on which the sustenance of the savage and his family depends. Throughout, the resemblance is in one aspect of an outer act, not in motive, nor in interest, nor in the social setting in which the activity is exercised.

To make the theory work it has been necessary to construct a primitive man. This Mr Herbert Spencer did by an ingenious combination of records gathered impartially from prehistoric times and from contemporary

savage life. But, as M. Ribot remarks, "nothing proves that this picture will suit all classes; there have existed not one primitive man, but primitive men differing considerably, according to race and environment."¹ No further comment seems needed on that pedantic German invention known as 'culture epochs'. These begin with this mythical personage and come down to the present day, claiming to lead the child by the age of fourteen through all the supposed successive stages of human development.

Nothing but careful and wide observation will give the required knowledge in any detail, and the records of such observations are by no means adequate. Many merely give single anecdotes detached from the life and circumstances of the child, and recording only age and sex. Others are gathered from children's own answers to questions, from which an attempt is made to reach a kind of average result. All such records are susceptible of various hypothetical interpretations. The child's estimate of his likes and dislikes will be coloured by the recency or remoteness of the pleasant or unpleasant experiences; and his desire to pose or to give the answer he believes to be desired or expected will often distort his statements without any deliberate intention to deceive. If answering the questions be voluntary there can be no assurance that the combined result is typical, for children of practical temperament will be likely to appear in a much smaller proportion than they are in actual life; if it be not voluntary the probability of vitiation by deliberate obscuring of the inner life, or by carelessness or forgetfulness, is increased. All results obtained by this method must, therefore, be used with the utmost

¹*Psychology of the Emotions* (Eng. trans.), p. 288.

caution. At the best they give suggestions which may be of use in our own observations.

We are left, then, with actual personal study of children as the one means of gaining a real knowledge of their interests in relation to their lessons. Of course, each educator does, with more or less success, gather some knowledge of his children's interests. But the teacher is so bound by tradition, often existing in the form of pedantic 'Regulations' of some Education Authority, that his observations on the point are apt to be "cabined, cribbed, confined." What is especially needed is careful and judicious investigation of what subjects and what parts of subjects are found to be most interesting to children in general during the successive years of school life. This interest must be judged solely by its effects on mental and practical activity. It is no use asking the children. They will in most cases tell you what amuses them most, or has entertained them most recently. The only way to get at the truth is to watch their work. If a child give time to a subject out of school hours his interest in it is thereby proved to be alive. In schools, and especially boarding schools, in which various leisure-hour pursuits—such as some branch of natural history, photography, manual work, study of architecture or of archæology—are encouraged, the general tendency of an individual's interests are easily seen, and also the possible changes they may undergo as he increases in years.

If teachers in large numbers would collect and publish the results of such observations we should be able to make some approach to a knowledge much more precise than we have now as to the constitution of a really educative Time-table. No doubt there would be variations in the results observed, according to the skill and

enthusiasm of various teachers. But with a large number these would tend to eliminate each other, the specially good results in the excitement of interest due to the genius in teaching being balanced by the specially bad ones obtained in the same subject with similar children by less capable teachers. There would remain guidance for the teachers who want it most, if only because they are the most numerous—the worthy but somewhat commonplace folk who form the majority in every walk of life. To be of value such reports must be definite. They should state explicitly the age and sex of the pupils, the kind of matter selected, the method in which it is taught, the proofs of interest shown, and also the situation of the school, especially with regard to town or country and to the social class of its scholars. With such real material to guide us we should find, I venture to prophesy, that modifications of considerable extent, though, perhaps, mainly in matters of detail and of emphasis, would be needed to fit schemes of study to schools differing much in these respects.

When we know what the results of the present schemes of instruction are, both the need and the direction of more fundamental changes will become evident. If it be found quite general that certain kinds of lessons fail to inspire to any degree the children who have to learn them, then those lessons are at least open to grave suspicion. They may not only waste time; they may hinder the formation of some other interest. Very strong extraneous reasons would be needed to justify their retention. Possible substitutes should be tested and judged in the same way. So I urge that before teachers condemn educational psychology as failing to give them all the detailed guidance they wish, they

should contribute to such psychology the matter which they only are in a position to give in the necessary detail and with the necessary exactness, and on which alone it can work. Of abstract assumptions and deductions from them there have been enough and more than enough. Until more exact knowledge, gathered by careful observation over a wide area, is available, the exposition of the order of the development of children's interests can only be an outline sketch wanting both in precision and in definiteness of contents.

A child's interests at any time express the degree to which he is able to co-ordinate himself with his environment. This is a continually developing process, marked on the one side by growing power of dealing with objects, and on the other by increase in the variety and complexity of the objects dealt with as they appear to the child. Throughout, the interest advances through effort; that which simply determines movement from without awakens no interest, because the movement so determined is outside the sphere of desire and purpose. The stages of the development are, therefore, marked by the characteristic activity of each. To speak of 'stages' implies no precise limits nor any exact uniformity in development among children. Each child, indeed, may be said to have three ages—the physiological, the mental, and that attested by the registrar of births—and these three do not always coincide. Still, there are periods marked by characteristic activities, if not by exact age boundaries, whose names are embedded in common thought and speech.

The age of infancy, up to some two or two and a half years, falls outside our province. The baby's life is essentially responsive to outside stimuli. It is learning

to distinguish between itself and objects about it, and is busy getting into relation through language with other minds. But purpose is not separated from impulse, and education, as distinguished from nurture and as meaning control through influence on will, can hardly be said to begin. Those specially interested in this time of life will find several careful monographs dealing with it.

The stage of childhood, which lasts till somewhere between five and a half and seven, is one in which the interests centre essentially in personal activity. This is proved by the most spontaneous activity of all—play. At first the play is the mere outpouring of surplus energy; it has no meaning beyond movement. Then it begins to be symbolic. A little boy of four will prance round a room on a walking-stick calling it a horse, not because he fancies any resemblance to a horse but because the idea of the object is of no importance at all. The activity is all that counts, and the whole value of the stick is that the child can put a leg on each side of it and still move with perfect freedom. Similarly, the interest in a rocking horse is in its *rocking* capabilities, not in its greater or less resemblance to a living horse. In so far as the latter intrudes into the child's consciousness it prevents the full absorption in activity which is what the child instinctively wants. The uneducative effect of elaborate toys is obvious.

The child chiefly plays alone. He may use other persons as objects to call out his own activity, but his play is essentially just that activity. When he begins to seek the approval and admiration of his elders he is beginning to take the next step in his progress.

This aspect of valuing things as occasions of activity is found throughout this period, of which play is the

characteristic form of expression. Each thing is dealt with as a whole and in large and broad movements. The nerve co-ordinations formed are those which govern the larger muscles. The child is not interested in details and is not capable of dealing effectively with them.

Though the interest is predominantly in the activity, and things are valued as they enter into that activity, yet this awakens of necessity the instinct of curiosity. The child soon begins to ask questions, though at first many of them evince no real intellectual activity. Any answer suffices, yet the question is often repeated several times. Part, at any rate, of early questioning may be regarded as only one of the forms of responsive activity to which objects stimulate the child. The question is often asked more for its own sake than for the sake of an answer.

The transition from childhood to the next stage may be regarded as begun when a child shows any sign of wanting to be able to connect things in some sort of explanation. The questioning becomes definite and persistent, and the same tendency to connexion is seen in the growing purposiveness of the child's activity. He loves stories which bring together things in his experience, and is content to accept the marvellous. The essence of his enjoyment is that the tales show some sort of coherence, and bring out strongly simple and appropriate consequences of actions which he esteems good or bad.

It is now that the child desires to work as well as to play—a desire which should assuredly be gratified. This is very well illustrated in a short conversation between a professor of education and a little boy of barely six years old who attended a kinder-garten. “Well, Harry, do

you like going to the kinder-garten?" "No, I don't." "Why, isn't the teacher kind to you?" "Oh, yes; she's all right; but I want to go to school to learn to do sums." As is characteristic of his age he stated symbolically his wish to work, using a form of school work doubtless made familiar to him by his elder brother's home lessons. This wish to work—to act with regard to something to be accomplished—may easily be choked. In some homes and in some schools it never flourishes; the whole activity finds vent in amusement and play. The product is not usually either a useful or a happy citizen.

On the other hand, the premature inuring to adult work from which many of the children of the poor are not yet immune can only result in the narrowing of interests and a consequent decrease in the joy and value of life. The work itself is not that to which their natural interests would lead them, but is forced upon them entirely regardless of the springs of their own energy. A little street arab will fend for himself in a way impossible to the public school boy of twice his age. But his life is narrowed to that: in all that makes for nobility and, in the best sense of the word, culture—the flowering of all his capacities—he is woefully deficient. Of the possibility of these he has been despoiled.

The tendency towards purposive activity is seen in the games. These are now more played in common, and are often of a dramatic character. The children imitate the occupations of their elders. An element of reality is demanded; things and persons are still partly symbolic, but the symbolism must have some resemblance to the reality. Thus, a little girl likes a doll's house, a set of toy tea-things; a

boy delights in a Noah's Ark. But the dramatizing must come from within, otherwise it is not an expression of living interest which will lead beyond itself. It is here that kinder-garten games may fall short by being made mere external exercises. Then they secure the shell but fail to reach the kernel. These imitative games are more popular with girls than with boys, and persist longer in their lives. With boys over six they soon begin to lose their zest.

From about six to seven is usually a time of exceptionally rapid bodily growth, but not of corresponding mental expansion. It is, indeed, a transition stage, when things as well as actions are beginning to press themselves on the child's interest, and he has not yet learnt to accommodate himself to this new point of view.

During the next few years—those of early boyhood and girlhood—physical development goes on more slowly, but it would seem that much nervous and muscular co-ordination is being effected. This is shown by an increasing interest in things and in what can be done with things rather than in the doing as mere action. The boy more and more admires skill and the success in doing to which it leads. This he feels he has not got, so he sets himself to imitate in order that he too may be able to do what others do. These are the years in which deliberate imitation, not for its own sake but for the results to which it leads, is most common. Skill shows its growth in power to work with smaller and smaller details. Always it deals with single things of no great size. The child's interest is so concentrated in them that a great whole, such as a landscape, has no meaning for him.

The child, then, is still physically active, but his

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activity is more and more referred to ends external to himself. He acts to accomplish something; he is not satisfied unless he accomplish it well; therefore his intellectual interests are awakened in the service of his practical ends. So he learns eagerly about the objects which he can bring into his own acts.

The same kind of interest, in an extended form, finds satisfaction in stories of adventure of all kinds and in accounts of how peoples in strange lands do things analogous to those he does himself or sees others do around him. At first, when the interest is still chiefly in the action, he is not concerned with the truth of the stories. But as he more and more esteems his activity on account of the actual results it brings to pass he wants to know whether what he is told be true. It is not that he banishes fiction from his interests, but that he wants to put it in its proper place as play ministering to emotional interest, not as work nourishing directly intellectual interest and indirectly practical interest and having a real meaning in life.

The games characteristic of this period show the same features. They develop muscular co-ordinations and judgement of sense impressions, and they are expressive of the growing feeling of the self as producing more or less successful results. So there is a great development of competitive and emulative games, especially among boys. They delight to play together, but not for a common end. The association is one of place and time, not one of purpose. They pit themselves against each other in running, leaping, throwing. They dare each other to feats of derring-do. This is charmingly expressed in John Heywood's *Play of the Wether*. The gods under the presidency of Jupiter are met to decide

the kind of weather which is best for mankind. Typical people are called to give evidence, and at the end comes a school-boy who testifies—

“ All my pleasure is in catchynge of byrdes,
 And makynge of snow-ballys, and throwynge the same ;
 For the whyche purpose to have set in frame,
 With my godfather god I wolde fayne have spoken,
 Desyrynge hym to have sent me by some token
 Where I myghte have had great frost for my pytfallys,
 And plente of snow to make my snow-ballys.
 This onys had, boyes lyvis be such as no man leddys.
 O, to se my snow-ballys light on my felowes heddy,
 And to here the byrdes how they flycker theyr wynges
 In the pytfale ! I say yt passeth all thynges.”

Such trials of strength and skill bring home to a boy his superiority to others. His inferiority he is usually less willing to grant. There is always some extenuating circumstance. He cannot, indeed, bear to think of himself as incapable, and so strong and general is the feeling that he quite often receives the comfort of acquiescence from his companions when he is on good terms with them. When he does not he is apt to try at once to prove that at any rate he is superior in the noble art of self-defence.

The same emulative spirit shows itself in school work, and it is quite permissible to make use of it. In its purely personal form it is characteristic only of this stage. As it takes on a more social form in the next stage the momentary quarrels to which it here leads are put away with other childish things. With girls individual emulation is apt to take a more bitter form and to be more prolonged than with boys. Exceptional care and caution in appealing to it are needed.

By about ten years old the child has acquired a fairly good control of his bodily movements ; in other words, he has the mechanism of skill. His interest is now more and more in the relations of things. He delights in constructive work in which he can put his skill to practical account and see the successful output of his efforts. At first he is satisfied that this should be imitative, for at the beginning of a new mode of acting the child of about ten still feels his inefficiency. But soon confidence grows, and as it does so his nature more and more cries out for freedom of initiative. His interest is enormously increased when the result of his labours is designed, as well as executed, by himself. As it is a capable human being we want to turn out from our schools, and not a number of well-made joints or boxes or meat-hooks, considerations that he may spoil some material in his experiments should not count. What a vastly poorer place this world would be had inventors feared to spoil material !

Planning a construction is general thought expressed in concrete terms. The boy or girl is, then, capable of such thought. But to be capable of it is to have an inherent need for it. The same developing power of systematizing experience is seen in all departments of activity. The boy begins to make collections of stamps, of butterflies, of birds' eggs, or of something else which he values, and he makes some attempt to classify them. True, the attempts are elementary, and, especially at first, apt to be based on resemblances of shape and colour and size. Yet this is an advance. Collections made in earlier years are heterogeneous both in matter and in arrangement. Naturally the first generalizing bonds which appeal to a boy or girl are those of obvious resemb-

lance. Doubtless that leads to thinking some relations which are not justified by the facts, but further experience—which the school may well arrange and expedite—leads to criticism and revision.

Early in this period the same love of mental inquisitiveness is shown in a very general liking for puzzles—at first mechanical, afterwards more purely intellectual. Such geometrical constructions as cutting a square in a certain way so as to form another figure, or arithmetical enquiries like “When Jack was asked how much money he had he replied, ‘If I had as much again, half as much again and four pence halfpenny I should have a shilling’. How much had Jack?” are eagerly solved. Boys of about thirteen have been known to take delight in such ingenious manipulations of figures as arranging the nine digits in a square of three lines with three figures in each, so that every possible line—perpendicular, horizontal, or diagonal—adds up to fifteen; or in interpreting such involved statements of family relation as “If your father’s father is my father’s son what relation am I to you?” Many, too, feel a keen interest in games of draughts or in the solving of acrostics.

Nothing shows more clearly the growing interest in relations than the development, soon after ten, of co-operative games among boys. In the earlier stage when children play together it is for their own glory. Even when they join in such a game as cricket or football there is a tendency for each to play for his own hand. That tendency bit by bit dies out, and the true co-operative spirit takes its place. This, too, means that the end is sought outside the personal self. Victory is desired for the side, in which only the social self is gratified. As this spirit grows stronger the individual becomes

quite willing to sacrifice his own glory—to omit a display of his own skill—if the doing so is to the advantage of the side. Nowhere but in such games is there free scope for the growth of this most desirable interest. Free gymnastics cannot give it. Indeed, their effect on the development of social interest is at the best to arrest it at the competitive stage. Still less can any form of physical drill give it. Such exercises cannot affect the development of interest beyond the point of desiring aptitude in free movements, that is, the interest of childhood. Beyond that their benefits are physical.

This is the age, too, in which the growing social interest begins to show itself in joining, or even in founding, societies. Such movements as school clubs, scout patrols, boys' brigades, furnish healthy outlets for this interest, which otherwise has been known to take the form of organizing gangs with various undesirable objects. Girls commonly show no great interest in either clubs or co-operative games. Their divergencies from boys become continually more marked, especially in all that affects social relations.

The demand for a clear distinction of truth from fiction persists. Interest is excited by persons and events; that is, more connexion is appreciated than in the earlier stage. This develops towards the end of the period into a deeper searching into relations of events, corresponding with the attempts to establish causal relations among things. But till the following stage both the knowledge and the insight stop short of a point which can be truly called scientific. The general remains as yet tied to the concrete.

The greater development of sympathy and understanding of others which is shown among other things

by the co-operative nature of play is accompanied by a dawning power to appreciate beauty. Pictures and poetry may begin to mean something more than records of incidents, and music more than a mode of giving vent to exuberance of feeling. It is not suggested for a moment that such things as pictures, poetry, and music, should now first make their appearance in the child's life. They should long have been familiar. Only so is there much likelihood of the aesthetic value now arising. Familiarity as fact normally precedes appreciation as beautiful. The emotional interest has never been absent. The child began with it, and, throughout, things as wholes have had a value for him. This recognition now takes the definite form of artistic feeling.

The last stage on which a few words should be said is that of youth. The beginning of this is well marked, though it cannot be assigned to any particular age, and is usually earlier with girls than with boys. It is essentially the age of secondary schooling and the time when the mixing of the sexes in school is most open to question. For the differences between them now extend throughout the activities of life; the girls developing the feminine characteristics mentioned in an earlier chapter and the boys the virile marks of manhood.

Physically the earlier years are marked by a great acceleration of growth as well as by the ripening of the new powers and functions of sex. When the intimate relation between bodily functions and the emotions is remembered it is not surprising that this should be a time of some emotional instability. Injudicious treatment may do irreparable mischief, and may force the soul into morbid introspection or into antagonism to all constituted authority. But the educator who under-

stands his business does not find it of excessive difficulty to replace command more and more by advice and suggestion. He ignores, it may be, sporadic outbursts of temper or despondency or extravagant joy, knowing that they are symptomatic only of a passing stage, and that mental balance will return with the re-establishment of bodily equilibrium.

The deepening of the emotional life, including a higher evaluation of all social relationships, is the most important characteristic of the period. It has its dangers, for it may run wild in riotous imaginations or in unhealthy sentimentality. A sane and cheerful environment, but one which does not stimulate the tendency to self-concentration, provides the best conditions. There is needed, too, abundant scope for the outlet in healthy games of the abundant energy of the boy at this period. Probably the public school with its well organized games and its absence of sentimentality of tone is, provided the moral atmosphere be pure, as good an environment as an adolescent boy can have.

The idea that mental work should be much lightened at the beginning of adolescence seems to be quite as unjustified by observation as by theory. It is one sound outlet for energy, and, especially among girls, an antidote to emotional absorption in the self. Moreover, the adolescent's intellectual interests have by no means lost their activity. On the contrary they show a rapid extension and an attraction towards inner relations and meanings of things which is quite consonant with the other notes of the period and which makes possible studies which can truly be called scientific.

Lastly, it may be noted that adolescence is emphatically the time when a deliberate decision is most often taken

as to the kind of character the youth or maiden intends to be. There have been heroes in earlier years, but now the hero is consciously identified with the self as the ideal towards which the self is to strive. It may be a composite hero formed from many sources, and its construction may not be deliberate. But however formed the ideal has to stand the test of criticism till it satisfies the aspirations of the soul. Then, in the inmost recesses of the spirit it rests in holy privacy ; to expose it to the world is unthinkable. All the more surely does it inspire and shape the life.

CHAPTER VIII

DIRECTION OF ACTIVITY

I SUPPOSE the teacher who has never had an inattentive pupil has yet to be discovered. Admonitions of the type "Now, Smith, you're not working; pay attention!" or "I wish you would pay more attention, Brown" are more or less frequent in all classes. On the face of them they assume that attention is a voluntary act—that not only its direction but its amount is within the control of the pupil.

Let us ask whether these assumptions are justified by an examination of our personal experience. Any example will serve, so we will take the reading of the present chapter. Why does the reader read it? The answer can only take us back to the reason which appeared under interest. He has a purpose in view which may be either naturally or artificially connected with the subject-matter. Whichever it is, this purpose decides that the reading shall take place. This necessarily involves attention, which is thus seen to be connected both with purpose and with interest. These are the characteristic notes of our personal activity; they give the value of the activity for ourselves. So long as the purpose persists, attention will be fixed on the chapter; in other words, that interest will be dominant in consciousness. If the purpose be changed, or simply

fail to operate, attention will come to an end. Of course, such flagging and ceasing will occur if the reader feel that the chapter brings him no nearer the accomplishment of his purpose. This summary examination consequently justifies the scholastic estimate of attention as a voluntary activity. It also suggests that such exercise of effort must be related both to purpose and to interest.

Probably everybody will grant without demur that attention is not a constant feature of his mental life. There are times when he delivers himself up to simple enjoyment of the present, and his interest in the objects which fill his consciousness is emotional. He does not think about them; he simply accepts them without question—with responsive heart rather than with understanding head.

“Oh! how I love, on a fair summer’s eve,
When streams of light pour down the golden west,
And on the balmy zephyrs tranquil rest
The silver clouds, far—far away to leave
All meaner thoughts, and take a sweet reprieve
From little cares; to find, with easy quest,
A fragrant wild, with Nature’s beauty drest,
And there into delight my soul deceive.”¹

That is the true holiday mood—the rest for jaded mind, repose as absolute as that of the body stretched on the fragrant heather. The spirit is dissolved in calm content. The very awareness of the objects around us is at such times vague; together they form the whole which wraps us round; separately they do not exist for us. Of course, attention may be awakened in such a state. The lively manœuvres of a wasp may rouse us

¹ Keats: *Sonnets*.

to both mental and physical activity; the arrival of a friend may wake us from our mental somnolence. Then we have a change of state—passivity has passed into activity; attention has been aroused, for the activity called forth has a purpose and expresses an interest.

In such a case of repose none of the outward marks of attention are present, and if we were asked to what we were attending the question would seem futile to us: we could only reply that we were attending to nothing; that we were not attending at all.

There are, however, other cases in which we are absorbed in the object, look at it intently, and show the general outward signs of attention, yet in which there is no attitude of enquiry and no directive activity of mind. The only way in which we can be said to be attentive is that we give up our minds to the influence from without. All cases of emotional interest are of this kind. The mental activity involved is receptive and responsive. It has no object to attain beyond what is already present. No effort to understand or to develop meaning takes place, or, if it do, it must be practically unconscious, or it is antithetical to the emotional interest. The mind is held by the object rather than holds it. It is not that there is pure passivity, for that is incompatible with mental life. In the interaction between the self and the environment which forms experience neither is ever passive. Each holds the other, as both a screw and the inverse groove in which it is inserted contribute to the binding power. But in such mutual gripping the emphasis of force and strength may be in any degree on either side. In pure emotional interest the object grips us: in concentrated attention we grip the object: but in neither case is the reciprocal

grip absent. The stronger grip determines the result. As when two boys wrestle one may so hold the other that he cannot escape while the tension is unrelaxed, and yet the one held is not passive but responsive and alert to every change in the position, so with the relation between inner activity and outer impression. The stronger grip decides the situation, but decides it in relation to the situation itself.

When we allow the current of our thoughts to be determined by the objects around us we ought not to speak of ourselves as attentive. There is no purpose working in a line of intellectual or practical interest. We make no effort to determine what we shall hear or see next ; we accept whatever comes. As an instance let us imagine ourselves present at a cinematograph show. The pictures may be excellent, and may succeed each other without breaks and yet without any suggestive connexion. Our interest may be intense ; our whole consciousness may be filled by the show ; we are so absorbed that we notice nothing else. We are full of enjoyment. But we are not full of thought. It is quite correct to say we are absorbed : it is confusing and misleading to say we are attentive. Of course, attention may be present. If the pictures raise in our minds an attitude of enquiry ; if they form a story-series which we try to follow and grasp as a whole, then, so far, the direction of our thoughts is determined by the desire to understand, and we are attentive. Even then, however, the attention is quite subordinate to the emotional interest. But this need not take place at all : indeed, the more usual attitude is one of amused contentment and gratified receptive recognition, in which the only control of consciousness we exercise is to inhibit

tendencies to wanderings of thought, and these are so feeble when we are really strongly held by the show that the inhibition is unconscious.

To bring this home more clearly—for educationally it is a point of first rate importance—let us imagine that one of the pictures suggests to us either a practical or a theoretical problem on which we have recently been engaged but which we have not yet solved. Then, unless we deliberately inhibit it, our thoughts begin to work towards the solution of the problem. Attention has arisen, but it has broken the state of absorption. It may even have taken the mind away from the pictures altogether. The difference between the two states is marked. In the one the mind is filled by a succession of pictures of scenes immediately recognized and demanding no further effort; in the other the mind arranges its own series of ideas in reference to a set purpose. One course is accepted from without, the other is originated from within. In the one we look; in the other we think. In this latter we stretch forth in attention towards a desired end; in the former we give up our consciousness to the attraction of our surroundings.

This determination of mental life by the attractions of things around is the only possibility to a baby. With the thoughtful adult it is comparatively rare, and is allowed as a holiday from the serious business of life. With many men and women, however, it plays a very large part in life, dominating attention rather than dominated by it. People who can find no better employment for their leisure time than some form of trivial amusement show by their behaviour that in relation to their surroundings it is not they who have the master

grip. Consider what a vast number of the youths who leave school never read a book that demands thought, never take up any intellectual pursuit. Their stage of mental development is evident. Perhaps parents and teachers could do worse than ask themselves the reason. What is evidently wanting is the effective combination of purpose and interest. Has either home or school done all that was possible to cultivate it? Have they, perchance, done, all unintentionally, the very opposite, under the obsession of the superstition that interest and pleasure are synonymous—that absorption means attention?

Even, however, were the best possible means being taken to develop purpose and interest, it is clear that the younger the child the more he is held by the things about him. His attention, indeed, begins at first with his own actions. Probably the first sign of dawning attention a baby shows is when it begins to follow with its eyes a bright light or some other object which attracts it. Its interest in the object is emotional; the impression is simply pleasant. The child shows signs of satisfaction when the object comes into the field of vision, and of dissatisfaction when it is withdrawn. When it discovers that its own action can retain the pleasure it has made a tiny but distinct step towards control of the contents of its own consciousness.

We saw in the last chapter that the concentration of interest in personal movements is characteristic of the first few years of life. The child learns to guide his activities so that they bring about the relations he desires between himself and different parts of his surroundings. Objects are still things to like or dislike, not things to understand. But actions are things to master. To

them his attention is directed with this practical end in view. So it is that a child wanders from thing to thing. Except as guides or occasions for action they do not interest him, and the actions to which each prompts are isolated and soon exhausted. The thing he simply accepts. His interests are essentially emotional and practical, but the germs of intellectual interest are bound up with them. The awakening of this intellectual interest is shown when a child begins to want to know something more about things. Then first he really attends to them as things. One of my own earliest remembrances is, when three or four years old, cutting open a toy drum "to see where the noise came from." That certainly marked by an act of attention the liberation of an intellectual interest. Such manifestations at first are rare.

Throughout early boyhood and girlhood interest is still felt less in things as they exist than in them as they enter into some form of personal activity. It is easier, for example, to secure the attention of a child to an account of a tiger as a beast of prey, at one time hunter, at another hunted, than to a description, no matter how graphic or how brilliantly illustrated by pictures, of his appearance and structure. These latter the child will be keen on just so far as they are brought into the animal's mode of life. Doubtless he will look at the pictures without this relation, and may even be absorbed in them. But he will not *think* them, he will only receive them. There will be absorption, not attention. To think them is to relate them to a train of ideas the purpose of which is to understand how a tiger lives. This continues after the picture is removed. But when the interest excited in the picture is exhausted by the

picture it is merely emotional. It has given pleasure or furnished entertainment, but it has not contributed to the building up of a structure of knowledge. That there is not attention is shown by the child's indifference to all but the picture.

The inference is obvious. The attention of young boys and girls is closely connected with actual or imagined activity. If, therefore, that be not appealed to, there may be emotional interest, but there will not be intellectual interest. I should be the last to assert that emotional interest is not worth having. Attached to suitable objects it is the beginning of all artistic culture. But emotional interest attached to objects which are introduced into the teaching with the express purpose of arousing thought, is, from the point of view of learning, utterly out of place.

Here comes in the importance of going beyond the actual moment for the test. Absorption and attention are much alike in outward manifestation. In each there is concentration of gaze, intentness of attitude. The real test comes after. The younger the child the sooner the absorption is over, and always nothing remains behind but a reaction of lassitude. Has not many a teacher found his pupils very intent on his pictures or his scientific practical demonstrations, but at least equally slack in the other parts of the lesson? It shows confusion between the two states we are considering to say that they were attentive to the things in which they showed alertness. Had they been, a train of purposive thought would have been started even if it had not been already in existence; for the meaning of those things is found only in a train of thought. The very fact that the spark of life died out as soon as the entertainment was over

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proves that the interest was only emotional, and not the intellectual interest from which attention is born. There may even be this absorption in a whole lesson with little or no true attention, if the pictures, lantern-slides, 'experiments,' or anecdotes, be numerous and striking. The intellectual value of such lessons is no greater than that of a cinematograph show. Unhappily, however, the former claim to give intellectual culture, which the latter frankly does not. That children should be amused and entertained is right enough in its way: only let us not think it the same as being taught or trained.

It was seen in the last chapter that both emotional and intellectual interest may be excited by literature. It is essential to good teaching that the teacher should be quite clear to which he wishes to appeal in any one lesson. If the passage demand thought for its elucidation, then a lesson appealing to the intellectual interest should precede one in which the aim is to awaken the emotional interest. In the former lesson the teacher's purpose is to arouse in the pupils a desire to understand. This implies that attention must be directed to a line of enquiry similar in general character to one which seeks to understand the nature of any concrete object and its immediate relations to other things. Here the object to be analysed is a thought-construction, in which the thought-elements hold certain relations, and the whole, by poetic figure or allusion, is connected with much outside itself. The quest is a quest of thought, and the interest is intellectual. It is sometimes said that apprehending the meaning of a passage is a passive process. This is seen to be erroneous when it is recognized that the meaning of another's expression of his thought must be sought as surely as the meaning of

physical occurrences. Whoever has tried to master such a poem as Browning's *The Ring and the Book*, or such a philosophical work as Hegel's *Logik* will grant that the quest may be as difficult as the discovery of the habits of wasps or even of the nature of radium. The mistake arises from confusion between seeking the meaning and contemplating it when found. In each case the mind accepts the discovered fact; but also in each case the fact has first to be discovered.

One may hope that in a lesson dealing with the intellectual grasp of a poem there may be an undercurrent of emotional interest at the bottom of many of the pupils' minds. A consideration, however, of the opposition between intellectual and emotional interest will lead us to the decision that in that lesson it had better rest there. A later reading, when no talk of meaning need be introduced, should be devoted to stirring this interest strongly and making it predominant. In such a reading we aim not at attention but at absorption, and attention should play the very subordinate part of so following the piece that the object of emotional interest is formed in the mind. Evidently the introduction of questions, which always provokes the intellectual attitude, is fatal to success.

Further, the antithesis between emotional and intellectual interest suggests that with younger boys and girls the passages of literature intended to rouse an emotional interest should be simple in idea and expression, so as to require no extended activity of the intellectual interest. For this is likely to remain attached to the poem and to be fatal to any real emotional effect. A silent reading to get the drift of the passage; a question or two to make sure that it has been grasped;

then an impressive reading by the teacher is the most probable road to success. Again it is absorption not attention that is required.

When the distinction has been thoroughly grasped it will be found to solve more than one scholastic puzzle. Children have been absorbed in a lesson or a series of lessons, and have shown at the end knowledge neither of the facts nor of their relations: the interest excited has been more emotional than intellectual; there has been little or no attention. Boys and girls who have shown a liking for school lessons drop them all directly they leave school: again the failure to excite real intellectual interest is the cause. School children, it is too often justly lamented, do not develop persistence and perseverance under difficulties: this, too, because absorption has taken the rightful place of attention in their lives.

Even when the course of ideas is determined from within it is not always guided by purpose or controlled by attention. The most typical case is when in a reverie or day-dream we let our thoughts wander where they will. Then it is not the present surroundings which hold us, but images derived from the past, now in familiar form, now in new and ever varying combinations. To all around us we may be quite oblivious. To the onlooker we may seem to be intent on a train of thought. Yet we are exercising no mastery over the sequence of our ideas, we are seeking no purpose, we are putting forth no directive energy. As before, at any moment the condition of things may be changed. Some idea in the train of musing may rouse a dormant interest, and immediately we may begin to direct our thoughts by attention towards a special object.

“Imaginings will hover
Round my fire-side, and haply there discover
Vistas of solemn beauty, where I'd wander
In happy silence, like the clear Meander
Through its lone vales ; and where I found a spot
Of awfuller shade, or an enchanted grot,
Or a green hill o'erspread with chequer'd dress
Of flowers, and fearful from its loveliness,
Write on my tablets all that was permitted,
All that was for our human senses fitted.
Then the events of this wide world I'd seize
Like a strong giant, and my spirit tease,
Till at its shoulders it should proudly see
Wings to find out an immortality.”¹

Until attention “like a strong giant” does seize the direction the state is one of mental play ; the mind is held by the attraction of its own images.

If, after a time of musing, one succeeds in recalling the mental wanderings in any completeness one is amazed to find how extensive and, at first sight, disconnected they have been. Yet there has been no break in the chain. In all the divergencies every point of new departure has belonged in some way both to the preceding and to the succeeding topic. Both Edgar Allan Poe and Conan Doyle have made their ideal reasoners amaze their companions by recalling a train of musing which observation had enabled them to trace. That we may all have the same definite sequence before us I will quote Mr Sherlock Holmes' reproduction of Dr Watson's reverie, as containing more familiar topics than the more ingenious and elaborate train imagined by Poe :

“After throwing down your paper, which was the action which drew my attention to you, you sat for half a minute with a vacant

¹ Keats : *Sleep and Poetry*.

expression. Then your eyes fixed themselves upon your newly framed picture of General Gordon, and I saw by the alteration in your face that a train of thought had been started. But it did not lead very far. Your eyes turned across to the unframed portrait of Henry Ward Beecher which stands upon the top of your books. You then glanced up at the wall, and of course your meaning was obvious. You were thinking that if the portrait were framed, it would just cover that bare space and correspond with Gordon's picture over there.'

'You have followed me wonderfully!' I exclaimed.

'So far I could hardly have gone astray. But now your thoughts went back to Beecher, and you looked hard across as if you were studying the character in his features. Then your eyes ceased to pucker, but you continued to look across, and your face was thoughtful. You were recalling the incidents of Beecher's career. I was well aware that you could not do this without thinking of the mission which he undertook on behalf of the North at the time of the Civil War, for I remember you expressing your passionate indignation at the way in which he was received by the more turbulent of our people. You felt so strongly about it, that I knew you could not think of Beecher without thinking of that also. When a moment later I saw your eyes wander away from the picture, I suspected that your mind had now turned to the Civil War, and when I observed that your lips set, your eyes sparkled, and your hands clenched, I was positive that you were indeed thinking of the gallantry which was shown by both sides in that desperate struggle. But then, again, your face grew sadder; you shook your head. You were dwelling upon the sadness and horror and useless waste of life. Your hand stole towards your own old wound and a smile quivered on your lips, which showed me that the ridiculous side of this method of settling international questions had forced itself upon your mind. At this point I agreed with you that it was preposterous, and was glad to find that all my deductions had been correct.'"¹

An examination of this train brings out very clearly the purposeless character of the whole. There are little trains of sequent ideas, which "did not lead very far". Attention, when present at all, was too feeble to keep

¹ *The Resident Patient.*

hold of any topic. Some attention certainly did come incidentally into the Beecher series, for there was deliberate recall of connected events, but there was no purpose to reach a definite result, to solve a particular problem, or to answer a specific question. Thus the train of musing as a whole shows no attention to any one matter. It is not fruitful and deliberate thought ; it leads nowhere in particular, and were it not interrupted it might go on indefinitely with continual changes of subject.

The points of new departure in this train are easy to explain. A newly framed picture suggests another and unframed picture ; that leads to the ideas of framing and hanging. Here this small train naturally ended ; it had exhausted itself. So the mind reverted to the previous point of departure and from it set off on a new series. In this, the picture of Beecher suggested the man, which naturally raised in succession the chief events of his life. None was dwelt on till the Civil War was reached. This by its emotional interest held the mind. But now the general topic war took the thoughts to that other war in which Dr Watson had himself been wounded. This brought back the memory of the wound, and the unpleasant character of that experience raised images of the suffering inseparable from war, and doubts as to the general wisdom of international appeals to arms.

If we consider these junction-points we see that they may be of any character, but that each contains an element common to the two experiences it unites. 'Picture' is a common class with many particular instances, so that any one instance may suggest any other through this common agreement. It is as if we had once suffered ship-wreck. Not only that steamer or that

cape would recall the incident, but any steamer and any cape, or indeed any vessel and any coast, might do so without any further likeness between them. The thought of picture leads to framing, and that to hanging because such connexions are common in experience. That a photograph recalls its original is due, of course, to its resemblance to him; that is its one reason for existence. To muse on a man is to bring to mind what we know of him, especially if he is not a personal acquaintance; for, indeed, what we know of his life is to us the man. When from one war the thoughts diverged to another war we have again a similar bond to that which connected the two pictures, but here determined by personal interest. This striking life-experience recalled the wound which was its most intimate personal feature, and that led to a logical generalization which obviously expressed an opinion already formed.

Nor is it only in private reverie that our thoughts are thus discursive. Consider the conversations of every-day life. How many topics are touched on in half an hour? What is their connexion with each other? Attention is continually losing control and yielding the reins to chance. How difficult, too, it is for many people to keep to the point in an argument! They are always going off at a tangent, till the end of their remarks has nothing to do with the purpose with which they started.

The train we have examined is, of course, an extremely simple example. Each reader can find more complex ones within his personal experience. That present experiences bring to the mind ideas of other things and events is the most common fact known to every one of us. It is but seldom that we attempt to discover why

just this thought was raised. When we do we often cannot succeed. For it is not always the most prominent thought that suggests the next idea. We have all known occasions when a train of thought or a conversation has been broken in upon by the sudden rush into consciousness of the idea of something quite different. It may, or it may not, be possible to trace the origin of such an interruption. If in a conversation with Jones I suddenly catch sight of Brown and remember that I have forgotten to post a letter I promised to post for him, my talk with Jones will be likely to be interrupted, and certainly my attention will be disturbed. But in many cases it is impossible to find a cause for the new thoughts. It may be something which only enters into marginal consciousness.

“Music, when sweet voices die,
Vibrates in the memory—
Odours, when sweet violets sicken,
Live within the sense they quicken.”¹

Few can recall the scents of flowers as separate and distinct remembrances. But that they do linger in the memory is proved by our power to recognize them. Nor do we as often pay specific attention to such impressions as receive them as part of the whole mental state at the moment. In the dim background of consciousness they exercise their influence, and if they enter there afresh they may bring back to our minds some remembrance of the past into which they had also entered. “A warm draught of air in midwinter, fanning the face suddenly and for an instant, charged with some exotic scent, may call up a person, incident, or locality, connected with a period of one’s life passed years ago

¹ Shelley.

in the South, or it may only create a mood corresponding to the sadness or joy of those days.”¹

The last consideration is very important. We have seen that the emotional side of life is closely connected with the mass of dim impressions in the background of consciousness. Some here, some there, of these have been similarly present in other moods of like tone. So it is inevitable that the thoughts and remembrances which come most readily to our minds when we are sad should have a mournful tone, while those which occur in cheerful moods should themselves be gay and bright. How spontaneously this comes about is illustrated by the sudden darkening of the present by the sight of a funeral ; by the cessation of fun on entering a church ; by the sobriety of mind the well-trained child feels on coming into school.

Such suggestion of ideas by ideas, or of ideas by some dim present experience, is not an incidental thing in life. It is the texture of life itself. What is incidental is the control of the stream by deliberate purpose. It is only occasionally that we follow such a purpose in thought for any length of time. More commonly we intermix little spurts of attention with a good deal of mental drifting. Life is like a river. Now in narrow bed it rushes on, calm and deep, in the irresistible current of inflexible purpose. Now it spreads out in shallows, with no perceptible onward motion though stirred by breaths of wind to gentle surface currents, flecked with the shifting light and shade of trivial and transient joys and griefs, here perchance bearing on its bosom dead leaves of regret, there broken twigs of abandoned ambitions.

¹ Waldstein : *The Subconscious Self*, p. 10.

This fact of suggestion is of the utmost importance in teaching, as in every other form of mental activity. Every part of a lesson is apt to start divergent trains of ideas in the pupils' minds. Often this becomes very apparent when they take part in an oral lesson by questions, remarks, or even answers. Absolutely to bar all such digressions checks thought altogether; to follow them may end nobody knows where. The only alternative is to remember that as a divergent train started from the original train so it can be bent back to it again, and that without discouraging initiative by a blank prohibition.

If we examine an attentive train of thought of our own we shall find that such a process is continuously going on. Connexion of ideas due to past experience is all we have to work with. If it fails our train of thought is brought to a standstill. Even the most successful thinker can recall many instances. The connexion he needs, the indispensable formula, the pertinent illustration, will not come. All his seeking is but "calling spirits from the vasty deep". The inter-connexions which have been formed in his experience, mainly without either effort on his part to form them or consciousness that they were formed, for some reason temporarily fail him. We all know how fatigue thus makes thought difficult or even impossible; how deep sorrow not only prevents us from remembering past joys but hinders the calm intellectual dealing with subjects we are studying; and how a joyous excitement exercises the opposite emotional effect but is an equally serious hindrance to thought.

Systematic thought is, then, the controlling of a train of ideas which would flow on in some course if not

controlled, but would not tend towards a predetermined end. It is this control which is properly called attention. Attention fulfils an executive function. We are interested in some branch of knowledge or line of activity, and we desire to increase the knowledge or to attain some result through the activity. An opportunity presents itself for doing so, and we resolve to avail ourselves of it. But to fulfil the purpose we must work out the appropriate means ; that is, we must secure that they occupy our minds to the exclusion of divergent thoughts and suggestions. This concentration on the means, step by step, from the beginning of the process to the accomplishment, is the work of attention.

But attention can only deal with the material brought to mind by that interconnexion of experiences which we have been considering. The presence of the interest gives a tone to the whole consciousness, and operates in determining the kind of recall in a similar way to the emotional tone. Thus the ideas recalled are to a much greater extent than would otherwise be the case pertinent to the matter in hand. So long as psychological interests are dominant I am not likely in writing this chapter, nor is the reader in reading it, to be troubled with mathematical or historical ideas. If the reader is keeping an eye on his own mind he will be conscious that those two words did immediately arouse such trains. It is to be hoped that he at once inhibited them ; that is, turned his attention from them. I made it easier for him to do so by prompting two incompatible trains. Had I mentioned only one of them the inhibition would have been more difficult in a mind in which there is a strong interest in mathematics or in history.

But let us suppose the extraneous suggestions nega-

tived, and ask why it was possible to negative them. I can hardly flatter myself that in every case the explanation would be that the reader is generally more interested in my exposition of psychology than in mathematics or history. No, the reason cannot be found in comparative strength of general interests. It must be sought in present purpose. It is purpose which guides attention in its rejections and in its acceptances of the ideas offered to it by the automatic workings of conscious connexions. Purpose itself in the background is the touchstone by which every suggestion must be tested. It gives a general direction which must be followed though it does not immediately dictate each step. As the bark of thought glides down the stream of interest purpose holds the helm while attention plies the oars.

Without purpose, therefore, we have no guide to attention. Here we doubtless have an explanation of much ineffectiveness in teaching. A class too often is not inspired by a purpose to master the matter put before it. Sometimes it starts with only the vaguest idea as to what the lesson is intended to teach. Then the only possible purpose is the abstract one of attending to the teacher, and this is quite other than attending to the subject. It may, and often does, only succeed in obtaining that spurious attention which satisfies itself in recognizing the ideas the teacher sets forth. The real state is that external determination of the course of thought without even an intelligent reconstruction of it in the mind of the hearers which has already been considered. One cannot have real attention without its two essential conditions—interest and clear purpose.

It plainly follows that attention is most effective and most easy when both interest and purpose are strongest.

Take as an example the writing of an important letter on a subject very near to one, and intended to bring about an object one has much at heart. One is not easily distracted; one's thoughts do not wander discursively but keep to the point, one selects and rejects expressions, all with the object of accomplishing the purpose. That is a simple case in which the act of attention is complete in itself.

When a wider purpose is considered, as, for example, the writing of a book, which may extend over many months or even years, of necessity there is not such exclusive filling of the mind. Here the idea of the subject of the book is always in the background of consciousness and is ready to seize on anything, even in other trains of attention, which helps its development. If one reads history or poetry or fiction, passages which bear on one's subject will at once recall it and emphasize their relation to it. Further, the purpose also is never really out of mind. It leads to certain lines of reading and of thought, to certain planning of time, to certain general arrangements of life to facilitate its accomplishment. To all these attention has to be given. Of course, they are only means, and the interest in them is indirect so far as the purpose of writing the book is concerned. In the actual periods of writing, interest and purpose dominate the train of ideas as in the case of writing the letter. The train itself is largely formed from the reading and thought which have previously been done under the dominance of the same purpose, but as it flows new connexions and relations occur which attention judges by the test of purpose, and accepts, modifies, or rejects.

To one who writes much there come times when the

impulsive strength of the purpose is but weakly felt. It may be that the work has been pursued so strenuously that there is some physical exhaustion, or it may be that new and conflicting interests and purposes have come into one's life. Then the habit of working at the book at certain hours does much to supply the impetus and to set one down at one's desk. Professional writers usually find that the only possible plan of securing the continuity of their work is to make a habit of writing between certain hours each day.

In these cases the difficulty is in beginning. Soon after the start is made the interest and purpose which had grown faint revive and the work goes on energetically. Yet, as we know, it cannot go on indefinitely. After a time the power is felt to be diminishing, and if work be persisted in it is very unlikely to pass the test of our own criticism the next day. There is no need to enlarge on this. Everybody knows that real work induces fatigue, and that fatigue first spoils work, then inhibits it. Yet we do not become really conscious of fatigue just anywhere in our work, but only when we come in it to a natural halting-place. Then the fact that we are tired may suddenly overpower us. The explanation is not far to seek. Fatigue is a constituent in consciousness, and while our minds are full of the topic we are working out, the fatigue, like emotional states in general, is thrust into the background. It does not belong to the main stream of consciousness, and in intensive attention that is all we notice. But when the subordinate topic on which we have been engaged is finished there is a relaxation of mental tension; attention is over for the time, and the character of consciousness as a whole is forced upon us.

All these points are exemplified in working an examination paper. The examination is interesting because it is the means to a distinction which it is one's purpose to win. To write the appointed paper therefore becomes a subordinate purpose. Very likely if we were guided by present inclination that subordinate purpose would not be energetic enough to set us down at the desk in the examination hall at the time appointed. We accept that determination as part of the purpose to pass the examination, and we accept it so fully that we do present ourselves even if somewhat unfit physically. At the end of each paper there is a cessation of attention to that subject, and possibly a feeling of fatigue. For the next paper the whole mental process has to start afresh. Further, there are subordinate lapses of attention at the end of each answer, for again a special topic has been dealt with as far as we propose then to deal with it. But at the earlier of these breaks, at any rate if we are in good health, we do not feel fatigue; though towards the end of a long examination fatigue is felt earlier in each paper than it was at the beginning.

When one considers how one answers a question one finds that it takes a little time to call up the desired ideas and to send the attention along on the new track. Our experience, therefore, tells us that the effectiveness of an attentive process rapidly increases at the start, then goes on with undiminished vigour for a time, then falls off rapidly as fatigue comes on; and that a well-formed habit is of the utmost service both in taking up an accustomed task and in keeping to it for the allotted time.

All these characteristics of attention are, of course, found in children. The school habit makes it easy or difficult for them to be attentive. In schools one often

finds a class attentive and industrious with one teacher and quite otherwise with another teacher. The children are the same ; both teacher and subject are different. In them one must seek the explanation, and it would be wise to look first at the teacher. For children, especially young children, are not very fastidious as to what they attend to, and easily catch an enthusiasm from a strong and sympathetic teacher. They become interested by contagion. With at least equal facility are they infected by a teacher's slackness. The older they get the less this is operative, but it always has some effect in youth, and frequently in adult life.

The natural cessation of attention at the end of a topic should always be regarded in the planning of lessons. Lessons which simply leave off anywhere when the clock strikes ignore an unalterable law of mental life. A little elasticity in time-tables is consequently a great aid to effective teaching. The oncoming of fatigue should be carefully watched. But at present the tendency is rather the other way. Lessons are so short that the scholars are not called upon to concentrate their attention for the greatest length of time possible to them without overpressure. That is to say, they are not trained in persistence and perseverance. The inordinate number of short lessons which most classes receive every day is a bad intellectual training both positively and negatively. It is bad positively, as it cultivates that volatile superficiality which is a sign of an unregulated and undisciplined mind ; it is bad negatively, as it makes impossible the self-discipline without which strength of purpose is impossible. Concentration in successive periods on different groups of subjects would assuredly give a better training of capacity.

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In anxiety to guard against undue fatigue, however, one must not mistake boredom for it. Boredom is a state in which healthy children should not naturally be, but it is a very common one in schools nevertheless. The chief reason is that the scholars do not see the value of their lessons, and that this is not compensated by enthusiasm in their teacher. Indeed, it would be almost a miracle if an intelligent teacher did become enthusiastic over much that it is customary to teach in school. Boredom is the natural attendant of having to do light work without interest. If the work be heavy we have not boredom but drudgery, soon leading to fatigue. This English boys, at any rate, may usually be trusted to avoid in their lessons.

Boredom may also arise in other ways. A scholar may be interested in the subject and have the purpose of attending to the lesson, but this purpose may be balked by the teaching. It may be too quick, so that he is called upon to pass on to a new idea before he has clearly grasped the present one; or it may be too slow, so that his mind is continually left unoccupied; or it may be confused and obscure. In each case the result is either boredom while the pupil is still following, or the dropping of the purpose and a mental rambling to more interesting subjects. Most people who have listened to lectures or to sermons, or who have read books, will be able to find examples in personal experience of all these varieties of effects on mental activity of faulty presentation of matter which is itself of interest.

Perhaps nothing is more fatal to the cultivation of a habit of attention among children than the well-meant but mistaken custom of many teachers of incessant talking. How far the idea that their scholars should

attend *to* them, instead of attend to the subject *with* them, is at the bottom of this practice it is impossible to say. But a false conception of the nature of attention is certainly operative as well. However it originates its results are disastrous. The pupils are never set to work out a train of thought—to govern and direct their own ideas in reference to a determined end. The teacher fixes the end, and often keeps it an inviolable secret locked up in his own breast. That is the first fatal error, and it leads to all the others. The scholars having nothing to work towards are simply taken on inch by inch by questions just looking forward that inch. They may begin at last to guess the direction in which they are going, but few take the trouble to do so. Why should they? That is the teacher's affair, as every lesson impresses on them. The result is that if any child learns to think it is in spite of his school work. The essence of thought is self-direction of ideas. That cannot be cultivated by carefully preventing the children from ever having the direction of a train of thinking in their own hands. No doubt, teachers are afraid that they would not cover so much ground unless they thus kept their scholars in leading-strings. They do not ask themselves the very pertinent question—What does that matter? Surely a boy or girl who can think, and who has learnt by thinking all that has been learnt, is better than one who has been personally conducted through wider tracts of knowledge, but who has sought and found nothing on the way.

The case when attention is working in the realm of a direct purpose which grows out of the means, and in which the interest is immediate, is the normal one. Then the energy of the whole self goes out on a path which

directly leads to a fuller and better self. The whole activity rather makes us more than brings us more ; so that every step in advance is itself a personal advantage. Throughout there is a feeling of self-satisfaction and enlargement of power. Then indeed the will and the desires are unified, and the greatest energy of which we are capable is thrown into the whole process. It is different when the purpose is only artificially connected with the means by which it must be attained. Then each advance is valued *only* as an advance ; it has no worth in itself. If we stopped before reaching the end we should be none the better, whereas in the former case no matter where we stopped we should have gained part, though not all, of what we were seeking. Take as an example the learning of a foreign language. If our purpose be really to know the language every advance partly fulfils that purpose. But if it be only to pass an examination in the language then if we cease to study it at a stage obviously beneath that required by the examination we can but judge our labour as lost and our time as thrown away. By ignoring the language in the future we bring our minds as soon as possible to the state they would have been in with respect to it had we never started learning it.

It has already been said that we cannot get through life without many such indirect purposes. Happy indeed are they whose main occupation is not one of them. According to their strength such purposes prompt attention. Many boys and girls will work devotedly to win a prize, although the subject worked at has no special interest for them. Many a man has made a fortune by assiduous attention to an occupation to which in his heart he has a strong aversion. All of

us have duties of which the fulfilment calls for the putting on one side of direct interests.

That we can and do give attention to parts of our work which in themselves have no attraction for us no teacher is likely to deny. The marking of examination papers is not a very delightful occupation even when we have the interest of discovering the effect of our own teaching, and when the papers are those of strangers even this bond of direct interest is absent. True, there are occasional bright spots when a particularly engaging 'howler' appears—as when a small boy once translated for me 'humanum est errare' by 'Humanity is a mistake.' But such reliefs are rare, and no one would undertake to mark several hundred papers for the joy of finding a few. Still less possibility is there of direct interest in filling up the numerous 'Forms' which delight the official soul. These take one away from one's real work of education, and therefore interfere with one's greatest legitimate interest. Nor is there usually the consolation of believing that the records called for either are or ever can be of the smallest service to education. Yet one does such work, and one does it carefully. That is, one really attends to it, simply because it is part of the routine work which is inseparable from the general work of teaching. We like teaching, and we take the rough with the smooth, convinced that every calling has its own collateral drawbacks.

In such matters it is not adequate to say that we do violence to our interests. Life is never so simple that only one interest at a time is alive in it. Continually we have to inhibit desires and tendencies because a wider purpose calls us. In these cases we certainly inhibit actions which, taken by themselves, we should find agree-

able. But we do so because a stronger interest calls us another way. True, this interest is indirect, but it is none the less real. Without it the purpose cannot be attained, and with that attainment we have identified our whole being. We may wish that the available means were different, but we recognize that they are not, and so we throw ourselves into them. No doubt, when the purpose is weak or of small importance our energy in attending to the means is less. That is only an example of the general rule that we put forth the strength we deem necessary, but no more, whether that strength be bodily or mental. But when the purpose is strong our indirect interest in the means is also strong, and our attention is then fully concentrated. Ranke incidentally gives an admirable example. After describing the devotion to State affairs of Queen Christina of Sweden he remarks: "It was not inclination for business which precipitated her into it with such ardour; she was urged on by ambition and by a sense of her sovereign power and dignity—but she found no pleasure in it."¹

No doubt when the means give pleasure, or pain, in themselves, when they yield a subordinate emotional interest, it is easier to maintain attention. Then our mental grip of the subject is reinforced by the subject's grip of us. But then there is usually a direct intellectual interest as well as an indirect. Then the subject is studied for its own sake as well as for the external purpose.

The only means of developing true attention to a pursuit not in itself interesting is to make it a means to a purpose felt to be of value. The more toil is required the greater that felt value must be. But to try to deck the undesired means with fruits and flowers to make

¹ *History of the Popes*, trans. by S. Austin, vol. ii. p. 214.

them attractive is quite ineffectual. The fruits and flowers are seized, that which they decked is rejected.

In this matter of indirect interest the force of habituation is of particular worth. That a child should think of certain subjects in school, that he should try to direct his thoughts in certain well-marked paths, that all his surroundings suggest work by their constant association with work, that the presence and acts of the teacher strengthen the suggestion, that the parents desire him to work, that all his class-mates are similarly affected and all adopt the attitude proper to school—all these and many similar small influences, not thought but felt, put the child's mind in the proper attitude of preparedness and readiness to attend to what the lessons may put before him. The manner in which he is required or encouraged to learn influences, as has been said, the kind and amount of attention he puts forth. That also is habit.

Among habits helpful to attention in school is certainly that of general bodily quiescence. A pupil constantly moving about is a distraction to his class-mates if not to himself. Too often, however, this outward help is taken by teachers as the essential mark of attention, and much insistence is placed on perfect immobility. The result is that inhibition of spontaneous movements becomes the children's purpose. So attention is to some extent withdrawn from the lesson. Learning ceases to be the main object. Moreover, the concentration of attention on the machinery of movement so innervates that machinery that the tendency to movement is increased. "In illustration... we may compare the attention repeated from time to time in holding a glass of water in the hands for a short period: if we pay a moderate amount of attention we can hold the glass when

it is almost full, but if we pay too much attention to our hands the tone of the muscles becomes altered, and the water runs over. None feel so restless as those who try to stand still.”¹ Many children are naturally restless, and their movements by no means imply idleness or wandering of attention. Nor is immobility in the case of children, especially those naturally phlegmatic, incompatible with absolute absence of attention: the mind may be wandering far in the realms of fancy, or may be as near perfect immobility as is the body. A wise teacher will judge the attention of his pupils by very different signs—by their mental alertness, not by their bodily repose. The absence of the latter is to be regretted only when its opposite becomes a hindrance to the former.

Attention is made difficult to all not only by poor health or temporary bodily derangement but by outside distractions. Young children taken into an unaccustomed room to be taught are attracted by the surroundings because of their novelty. They have little power of concentrating attention, and until they have satisfied their curiosity it is not of much use to expect the exercise of even that power. As age increases the distraction has to be more pronounced to draw our minds away from the line of interest. Of course, every such case is a struggle between attraction from without and attention from within. The issue depends partly on strength of present interest, but a great deal more on cultivated power of inhibition. One who has formed the habit can work amid surroundings that would render concentration impossible to another who might yet be able to attend equally well were he free from distractions. The difference, however, is in the nervous organization as well as

¹ R. Verdon, Article on ‘*Forgetfulness*’ in *Mind*, vol. ii. p. 450.

in past experiences: some can cultivate the habit more successfully than others.

Let us ask what happens when a distraction breaks in. Suppose one is answering an examination paper—a case in which the limitation of time makes it especially important that all of it should be devoted to the work in hand. The insistent sound of a gramophone in the street breaks on the ear. There are surely three possibilities. One may yield oneself to the distraction, and lose one's grip of the examination work. Attention to the one thing has been succeeded by absorption in the other without any attempt to inhibit the change. This may involve so much attention to the gramophone as is needed to follow the tune, but that is only ancillary to the enjoyment. In the second place, the gramophone may raise a new train of ideas, as, for instance, the idea of a friend who delights in such strains, and who has some business relations with one; then one may begin thinking about that business. In this case attention to the examination has been succeeded by attention to another subject suggested by the distraction: again the change has taken place without inhibition. Thirdly, one may keep in mind the importance of the examination, remember the limitation of time, and thus strengthen the original purpose, so that one is able to inhibit the giving of the mind to the disturbance. Then attention is kept on the original subject. One cannot exclude the sound, but one arrests every incipient trend of the thoughts in that direction. One puts all the more effort into answering the questions, and as one concentrates one's thoughts, more and more ideas cognate to the work in hand rush into consciousness and make the task easier. This is shown to be so by the fact of common experience that the more we are engrossed

in an answer the easier is this inhibition. If we feel that we are really writing round the subject, and that the ideas we are expressing are of little worth, or if we are between two answers or just beginning a new one, then inhibition is more difficult.

But distractions come not only from without. We all know what it is to wander in thought. Sometimes when reading a book one only discovers that one has reached the bottom of a page by the nearly automatic action of turning over, and one wonders what the page has been about. Though one's eyes have followed the words one's thoughts have gone off on another track. The fact that attention always works with connexions of experiences already formed, and largely outside our control, makes it easy to understand this. Of course, it only occurs when the purpose has for the time but little strength. Yet that is likely to happen, because, as we have seen, the purpose which directs a train of thought is always in the background. It is, I believe, common experience that we are more liable thus to lose our way in following another's thoughts than in working out our own; and least likely of all to do so when the working out of our own thoughts is attended by some bodily activity, such as noting down our ideas as they come to us. Great, too, is the influence of habit. A person who drills and disciplines himself can do much to form and strengthen the habit of concentration. If he find that reading without note-taking means wandering thoughts he will be wise to take notes. If he can keep his own thoughts fixed best when he jots them down he will be foolish to omit that help. It is, after all, a matter of self-control. If we cannot become perfect we can at least improve.

To sum up our results. Attention is occasional, not constant, in life. With some men and women it plays an important part; with others a comparatively small one. It is indispensable to the carrying out of purpose, immediate or remote. A purpose which remains in idea, but to the attainment of which attention is never bent, is a mere delusion and dream. Attention guides all reasoned conduct. It is essentially intellectual in its working, but it takes for its objects not only thoughts and lines of reasoning but things and modes of dealing with them. Thought deals primarily with the world and only secondarily with itself. Attention cannot be separated from interest or from purpose. But the interest may be indirect, and then greater strength of purpose is needed to make possible as thorough a concentration of attention as when the interest is direct. The effectiveness of attention and the power of concentration are decreased by ill health and by outward distractions. Attention to a topic fails when the topic is exhausted, when fatigue becomes pronounced, when boredom results from the mode of presentation.

When attention is thus looked at it becomes plain that power of attention is a matter of gradual growth, and that it grows within the development of purpose. It is further obvious that such development must be helped by guidance and discipline if it is to attain its full stature. Though some children are naturally of stronger will than others yet all are dominated by their surroundings, and, without training and restraint their strength of will is likely to show itself only in asserting a right to the most pleasant things immediately at hand. Every child needs help in the passage from absorption to attention. Of course, it is not meant that absorption ceases

It is operative throughout life, for life is not all work and struggle. But some of it is; and he who cannot disregard at need the attractions of his surroundings will make a poor thing of life. The transition is made through the incitement of purposes—by suggestion, by example, by habitude—adapted to the stage of mental development the child has reached.

It may, then, fairly be said that the essential task of education is to promote the purposive element in life. The baby has it not at all. The young child shows its beginnings. It has desires which prompt action, but it has no persistence. It is drawn away continually from one element in its surroundings to another. It has no plans beyond the immediate present. As intelligence develops, knowledge increases, and desires widen, the future is more and more constructed in imagination. In such construction the educator can play an important part. So actions are related to each other in a chain reaching to a foreseen and wished-for end. The process is continuous. Its outward expression is in the relation of acts to each other; in other words, in the organization of life round purpose: its inward force is the increasing meaning life is felt to possess.

Though the exposition of attention in the preceding pages appears to me to be in harmony with the facts of mental life and in accordance with ordinary thought and speech, yet I must confess that it differs somewhat widely from that current in most present-day writings on psychology. It, therefore, seems advisable to state briefly my reasons for rejecting the latter view. The most fundamental is that the doctrine treats attention as a form of cognition instead of as volition. It is affiliated with the hypothesis that all mental life is built up from sensa-

tions. From this it logically follows that sensation and attention are but different names for the same thing. This was explicitly stated by Condillac, probably the most philosophical thinker of that school: "As soon as I fix my eyes upon an object the mass of sensations which I receive from it is the very attention which I give to it."¹ Though such an identification is not usual now, yet when attention is regarded as the reflex of consciousness on whatever is presented to it, it is made just as much the slave of its surroundings as in Condillac's more direct statement.

It necessarily follows that whenever we are aware of anything we are held to be attentive to it in some degree. This usage, therefore, extends the application of the term attention "so as to include what we ordinarily call inattention."² This is obviously inconvenient. There is no need for another term to designate what we already know as awareness or consciousness. But there is need for a distinction in terminology between awareness due to our own efforts and awareness in the sense of passive reception and recognition of what comes into our minds without any controlling effort on our part. The use of 'attention' in common speech does broadly recognize that distinction, in that it regards attention as self-directed thought.

That concentration of attention on any object of thought does make it more distinct and prominent is certain. But to regard vividness in consciousness as a proof of attention is just as much to confuse result with origin as is the inclusion under imitation of all acts which

¹ *Traité des sensations*, p. 16.

² Ward: article on 'Psychology' in *Encyclopaedia Britannica*, 9th ed. p. 41 (b).

resemble those of other people, without consideration of the motive which led to them. "All attention increases vividness" cannot be converted to "All vividness is due to attention." Anyone who has suffered from a tooth-ache when writing an examination paper is aware that the tooth-ache was vivid enough all the time his attention was engaged with his answers. The difference between the two mental attitudes is surely clear, and it is equally evident which application of the term 'attention' agrees with ordinary usage.

It is because the common meaning of attention will remain in mind that the popular classification of "kinds of attention" into Involuntary, Non-voluntary or Spontaneous, and Voluntary or Volitional, strikes one as so remarkable. If in each case we substitute 'awareness' for 'attention' we see what is meant. For we can be made aware of things against our will—as of a tooth-ache. Or we may be aware of pleasant things which are present to our senses, or of agreeable thoughts which come into our minds without any effort on our part—that we have seen in absorption and in reverie. Or, lastly, we may have to put forth effort to get clear and vivid in our minds something of which we desire to be more fully conscious. In ordinary speech only the last of these would be called attention. To speak of 'involuntary attention' seems a contradiction in terms, and, indeed, is so if 'attention' mean anything more than awareness.

We have already examined, in the example of the distraction of a gramophone, what may happen to the course of thought when something is presented to consciousness against our will. There may be attention *from* the distraction, or there may be absorption in it with subordinate attention to it, or there may be attention to

something suggested by it. But none of these is unwilling attention *to* it. If we attend at all to it, or to something suggested by it, we do so willingly ; if we inhibit attention *from* it we evidently do not attend *to* it.

Under 'non-voluntary attention' is included not only absorption, in which attention is absent or is at its minimum and then only instrumental, but also that full and perfect attention in which the whole energy goes out in accomplishment of purpose through means in themselves directly interesting because each step partly fulfils the purpose. To speak of this most complete and powerful outpouring of our personal energy as 'non-voluntary' is a strange and misleading use of terms. When our whole will is engaged in bringing before us certain ideas, how can it be said that the appearance of those ideas in consciousness is independent of our will? Interest, we are told, explains the mystery : when we are interested mental activity is spontaneous. That is an ambiguous term. It may mean that the activity is an instinctive impulse not controlled by purpose ; or it may mean that it arises and flows on without our recognizing how, when it may be due to habitude or to unnoticed impressions ; or it may mean that it is an activity which causes pleasure or is not checked by pain. In one or other of these senses the flow of ideas which is constant in mind may, if it be so desired, be called spontaneous. But if that be made equivalent to attention then it would seem that consciousness of such uncontrolled streams of ideas as pass before us in reverie is attention, for to introduce direction of the stream is surely to make it voluntary. This makes 'non-voluntary attention' include inattention in the usual acceptation of that term, and so classes together two states essentially antithetical.

Indeed, this view of attention divorces it from purpose. It seems to imply that the will is a power external to the act of attention and independent of it, so that it can bring pressure to bear upon it. This comes out very clearly in the current exposition of what is called 'voluntary' or 'volitional' attention, which means bringing an obscure thought or impression to greater clearness in consciousness by our own action. Then we are told we exercise a direct act of will to attend. Doubtless we can decide to attend to a definite topic. Doubtless also, it is difficult at times to do so ; that is matter of universal experience and has already been considered. Our energy is not a constant quantity, and all things do not attract us equally. So it is harder to concentrate our thoughts at one time than at another, and that for a variety of reasons, some in ourselves, some in the objects to which we attend, and some in the conditions under which the attention is given. Doubtless, too, this is a voluntary activity. But it differs from that willing attention which is classed under 'non-voluntary', not by the presence or absence of will, but by the presence or absence of obstacles to be overcome. We are more conscious of the effort we make, because it is but imperfectly successful, and meets with obstacles, and always the overcoming of an obstacle makes very plain the effort we are putting forth—indeed, often demands an increase in that effort—because it seems to meet and overcome an effort exerted in opposition to us. Still, no one would say that if a door sticks when we go to open it the opening is a voluntary act but if it yields easily we open it non-voluntarily. In each case the act is voluntary because it is done deliberately to accomplish a set purpose. It is exactly the same with the mental

activity of attending. The opposition makes our effort more explicit, but does not change that relation to purpose which distinguishes the voluntary from that which is not voluntary. It is not that we put forth two efforts : one to make ourselves attend, the other in the actual attending. All the effort is in the latter. We are aware of it, but the awareness is not a second effort. We do not—even if we could—divide our effort into two streams, one of which compels the other.

We are further told, and that with emphasis, that “there is no such thing as voluntary attention sustained for more than a few seconds at a time. What is called sustained voluntary attention is a repetition of successive efforts which bring back the topic to the mind.”¹ I can only say that if it be so, in my own case I am not generally conscious of these very ineffective efforts. One can work at a distasteful task for a long time without any such continual use of the mental lash. The habitude of doing what has to be done keeps many a clerk attentive for hours to an occupation which in itself can hardly be of engrossing interest. If his attention ebbs and flows every second or two it does not affect his work, and he is not conscious of it. Attention regarded as the putting forth of effort may, of course, not always be the same amount of effort. But that is so whatever the topic or work attended to may be. That experiment may show rhythm of ebb and flow in clearness of cognition is not to the point when we are considering the question of the possible duration of sustained effort at a disagreeable task.

The classification thus seems open to attack even when interpreted as referring to modes of becoming aware,

¹ James : *Principles of Psychology*, vol. i. p. 420.

for several such modes are included under one head. To regard it as a classification of modes of voluntary mental activity leads to inextricable confusion. The educational applications made of the doctrine certainly show such confusion. The chief is that as 'voluntary attention' is only possible to adults for a few seconds at a time it is practically impossible to children altogether. Therefore the teacher's aim is to secure 'non-voluntary attention'. That, as has been said, includes both real attention and absorption. But, as the emphasis is placed on present interest, in practice it is too often identified with the latter. So entertainment and amusement take the place of purpose in lessons. Indeed, appeal cannot consistently be made to purpose, for to seek a purpose can never be a non-voluntary proceeding. Thus children are trained to live for the gratification of the moment, but they are not trained to strenuous and persevering effort. The doctrine which interprets attention as mode of becoming aware is transferred to the self-directed activity which ordinary speech calls attention. So, because the doctrine says 'voluntary' attention is a very infrequent thing in life, effort is made a very infrequent thing in education. Education to be real must work with a doctrine of attention which takes account of the most characteristic of all human activities—the subordination of the present to an esteemed good in the future.

CHAPTER IX

LEARNING BY DIRECT EXPERIENCE

“LIVE and learn” says the proverb, expressing with the greatest possible brevity a truth which has been abundantly manifest throughout the foregoing discussions. Living is learning, and we are assured that even fools profit by the lessons of experience. In the most fundamental matters of life a man devoid of knowledge is an impossibility, and when we speak of ‘an unlearned man’ we do so in an artificial and a conventional sense.

All informal learning by experience is, in the fullest sense, real. It is absorbed into the very texture of life and has the most direct bearing on its needs, out of which, indeed, it arises. One aspect of the life of every one is

“Getting increase of knowledge, since he learns
Because he lives, which is to be a man,
Set to instruct himself by his past self :
First, like the brute, obliged by facts to learn,
Next, as man may, obliged by his own mind,
Bent, habit, nature, knowledge turned to law.”¹

This informal learning which goes on throughout life is not acquired by the unaided efforts of the individual. Those efforts are guided and helped by the instinctive assimilation and deliberate imitation of the doings of

¹ Browning : *A Death in the Desert*.

those around us. Further, learning to talk is not only a new form of physical activity, or even of expression of thought or wish ; it is also of necessity a means of gathering both information and guidance from others. The whole forms one stream of experience continually being enriched by new activities, new enjoyments, new desires, new thoughts.

From the speech of others a child learns in two chief ways. That speech may direct and guide his activities so that what he does leads him to new experiences, or it may give him information about what he does not himself experience. It thus enters into the two ultimate modes of acquiring knowledge. It will make for clearness if we consider these separately.

It will be obvious to all that the former is primordial, for no words can convey information except in so far as they are filled with meaning derived from direct personal experience. The neglect of this truth has long been the besetting sin of schools. Too often they have adopted the position of Mephistopheles—

“MEPH. Hear, therefore, one alone, for that is best, in sooth
And simply take your master's words for truth.
On *words* let your attention centre !
Then through the safest gate you'll enter
The temple-halls of Certainty.
STUD. Yet in the word must some idea be.
MEPH. Of course ! But only shun too over-sharp a tension,
For just where fails the comprehension,
A word steps promptly in as deputy.
With words 'tis excellent disputing ;
Systems to words 'tis easy suiting ;
On words 'tis excellent believing ;
No word can ever lose a jot from thieving.”¹

¹Goethe : *Faust*, trans. by Bayard Taylor, Pt. i. sc. 4.

On the other hand such a reaction as would lead to neglect of communication as a means of knowledge, and so would limit, as far as it is possible, each individual to his own experience, and even in that minimize the help given by the guidance of others, is equally to be deprecated. All human advance is a co-operative movement in which the discoveries of each are available for all. To attempt to put back each child into the position as regards learning he must of necessity have occupied had human knowledge never grown to what it is, is to fly in the face of nature, not to take it for a guide. Nature itself prompts us to make use of others, for human nature is essentially social.

The fine art of instruction is to attain the due balance between direct personal experience and communication of the knowledge attained by others, to secure that these not only balance but amalgamate, and to provide that the resultant knowledge is as copious and effective as possible.

With the advance of civilization the demand for wisely determined learning becomes more and more pressing. The more complex is the life to be led the greater need is there for knowledge to meet its various calls effectively. Not that knowledge alone is demanded. Efficient life is a matter of purpose and perseverance as well as of knowledge and intelligence. Yet these are not isolated in life and cannot be isolated in a true education. Our purposes and desires are limited by our knowledge, and our perseverance is largely the outcome of the manner of our learning. Because, then, education seeks efficiency in life as a whole, one of its most difficult practical problems is always the determination of what the young shall be required to learn. Nor is it

one to which a general answer can be given. So long as we keep to the abstract, and really, though perhaps unconsciously, have in view the community as a whole, a good deal may be said for almost any subject. For evidently in a civilized community there is a place for every kind of knowledge which mankind has yet attained. Yet it is obvious that no one can learn everything that is known.

The question must, indeed, be approached quite differently—from the point of view of the pupils really concerned, whose efficiency or inefficiency will be largely determined by the answer. Only by a careful consideration of the relative claims of various forms of experience to emphasis in the training of particular classes can even an approximately correct practical solution be attained.

Nor does a valid answer long remain valid. The needs of each generation differ from those of its predecessors, and its own will not be identical with those of its successors. Were there not continual evolution of knowledge and of conditions of life this would make the task of education a hopeless one. As it is, the two opposite mistakes of a slavish adherence to tradition and a revolutionary disregard of the work of the past have to be avoided. The former is most often made by the school, the latter by enthusiastic and theoretical advocates of change.

The real problem for education is so to arrange those experiences of each child which are under its direction, and so to select the knowledge which shall be imparted by communication, that the individual life may be made as efficient as possible. Time and human energy are both too valuable to be wasted in learning what certainly, or

even probably, can add neither to the joy nor to the usefulness of life.

Efficiency, it need hardly be said, should not be interpreted narrowly. Too often this error has been made, and men have shown a lamentable tendency to limit capacity to one special sphere. At one time the efficiency sought was confined to facility and ingenuity in empty disquisitions of formal logic, at another to mastery of the Latin language, at another to dialectical skill in controversial theology, and often in our own materialistic times to commercial or industrial efficiency. None of these is adequate, because none takes account of the chief occupation of each one of us—to be a man or a woman. Efficiency is co-extensive with living, and in the normal life it grows in width as well as in depth. This is to say that efficiency is not something we possess but something we are. It is the product of our original capacities and of the whole of our experience. It is continually developing, for it is continually being nourished. But only when acquirement is taken up into capacity does it develop efficiency. Learning which does not increase the power to deal with some of the calls of life—whether moral, mental, aesthetic, physical, or what not—does not add to efficiency, and is, therefore, worthless.

It is evident, then, that the method of learning is as important a factor in true education as is the matter which is learnt.

“What good of giving knowledge if, because
O’ the manner of the gift, its profit fail?”¹

The fact that learning is guided by teaching tends to obscure in practice the truth that it is a living, assimila-

¹ Browning: *A Death in the Desert*.

tive, process on the part of the taught, and one in which the teacher can only provide nutriment and inducement. The power the young have of learning by rote statements they do not realize or understand still further obscures the fact that from many of their lessons they gain no real knowledge. The true learning which is increase of efficiency is always the result of real seeking—the satisfaction of an inner desire, not the imposition from without of an obnoxious burden. True teaching stimulates such seeking in ways adapted to the requirements of the pupils.

“So, minds at first must be spoon-fed with truth :
When they can eat, babe’s nurture is withdrawn.
I fed the babe whether it would or no :
I bid the boy or feed himself or starve.”¹

Prompting is necessary because we are naturally satisfied to know our experience just so far as it serves our present needs. A child’s knowledge looks to us very fragmentary, trivial, and ineffective. As a whole it by no means so appears to him : did it do so his life must be one of unsatisfied longing, and this is certainly not the characteristic of childhood. We may bring the need for external stimulus home to ourselves yet more directly by considering how very incomplete and imperfect—probably also inaccurate—is our own knowledge of many things with which we are quite familiar. My own knowledge of the mode in which the electric current moves a tram-car is assuredly of this nature. Yet I use the cars constantly without the slightest feeling of regret for the inadequacy of my knowledge or of desire to extend it. All of us can find

¹ Browning : *A Death in the Desert*.

an indefinitely large number of such cases. We feel our defects only when in some way we are called upon to do something which those defects hinder us from doing. The call may be mental or it may be physical. When it comes and is accepted it leads to effort to increase knowledge in that respect. But many of the calls made upon each one of us by our surroundings are disregarded. Indeed, this must be so, as they do not always come singly. The call of the tram-car to me to understand it is ignored because other and incompatible calls seem more imperative. I am more interested in my fellows than in tram-cars, and they challenge me abundantly to mental activity.

The calls to which we respond are those which interest us; that is, they come from things which we regard as of value for us. The world of knowledge we make for ourselves is not a kind of picture on which we placidly fix our gaze, but is a system of values—a mass of calls to which we find satisfaction in responding. So each one of us makes his world by his own activity: it is he who gives relative value to this or that kind of experience, and the mass of experiences, direct and indirect, are his world, and, in a sense, are himself, for the world of each one of us is the whole system of his own known and evaluated experience.

Looked at in this way it is seen that teaching is stimulus and direction, and that learning is enrichment of life which can only be attained by response to calls which are felt to be worth meeting. The function of teaching is to increase the number of these calls and to systematize them, and that in such a way that they may appear in life as a demand of the inner spirit and not only or mainly as a requirement of an outer authority.

In this way teaching both follows and guides the pupil's natural development. It follows it, because it is quite hopeless to attempt to make a child feel a call to learn which does not arise easily within his range of interests. It guides it, because by its provision of such calls it causes those interests to expand and to deepen in a way they would not do if left to themselves.

One of the most important, and surely not the least frequent, of a teacher's tasks is to awaken a child from the complacency of ignorance—an awakening made possible because the child is endowed with curiosity. We all know how our own interest has often been aroused by the suggestion to us by another of a problem of which we had never thought, and, very possibly, never would have thought. To make such provocation to enquiry regular and systematic is a teacher's most delicate and most important task. Curiosity easily gets into a groove of habit as do all our other activities, and without disturbing stimulus from without it would become narrow in its scope, and the individual would slowly petrify into the prejudiced pedant.

But merely to propound a problem is not of necessity to make it a felt and accepted call to enquiry; it must be so propounded that it arouses desire and stimulates activity, and this it can only do if the desire and the activity are, as it were, the next step in the direct line of growth from the intellectual position already attained. If that be secured it depends on the teacher's personality, tact, and manner, whether the call be felt so feebly that no response, or a very anaemic response, takes place, or so strongly that it becomes an impulse to strenuous and persevering effort. So it is that teaching can never become a mere mechanical adherence to rules of method.

It is throughout a living intercourse of mind with mind, and the vital essence of its success is found, not in technical skill, but in the contagion of enthusiasm.

Successful teaching, then, must be based on knowledge of the natural mode of learning. One cannot stimulate a mind to an activity which is foreign to it. So it is that the successful teacher is always one who has a true insight into the workings of his pupils' minds. Doubtless these all differ, but they differ in detail only; the general mode of mental activity is common to us all, just as are the general modes of walking, breathing, and digesting. A clear apprehension of this general form of learning by experience should safeguard a teacher against fundamental mistakes; a misapprehension of it will surely lead him into error. One must have some idea of how one's pupils learn or one cannot set out to teach them at all. In other words, every person who tries to teach has a theory of teaching. He may never have made it the object of explicit consideration, and so may be unable to expound it. But it reveals itself in the actual teaching of which it is implicitly determinative. Without clear thought on the nature of knowledge and learning, however, we are very apt to make false assumptions which may go far to vitiate our teaching.

The most common, and, perhaps, the most natural of such mistakes is that our thoughts are copies of the things we think about. Then it is easily assumed that such thoughts are built up little by little out of the elements into which at a later stage we can analyse them. The inference that teaching should begin with such elements and gradually combine them seemed obvious. So we had the maxim "Proceed from the simple to the complex" interpreted to mean that the starting-point in

teaching should be such elements studied in isolation, and the goal the concrete and complex whole. In harmony with this, reading in the mother-tongue began with letters, then proceeded through syllables to words and thence to sentences ; a foreign language was started by a study of its structure as set forth in its grammar ; drawing by making simple straight lines, then curves ; writing by practising separately the elements into which a perverted ingenuity could resolve each letter, and even by the dictation of these elements.

It would be difficult to find a more striking example of the evils of a false theory. And the theory was false because it was not the outcome of a searching examination of what exactly does go on in our experience when we learn something. It implied in its essence the confusion into which the uncritical mind so easily falls between its own thoughts and the things to which those thoughts refer. Its practical results were to divorce the teaching in school from the natural learning of the children, and thus to reduce school culture to the parrot-like memorizing of words very imperfectly understood, and to delay the acquisition of all such arts as reading and drawing. Reading the child really had to learn in despite of his teacher's method ; drawing, as a mode of expressing ideas and of representing visible things, he very seldom learnt at all. Moreover, the separation of school lessons from actual life put the former into the class of things that do not really matter, and so they failed to evoke interest and energy.

We may easily see how learning naturally goes on by examining how we make more precise and more complete our knowledge in some direction in which we are conscious that it is defective. We find that the process is

not a putting together of elements each of which is first clearly grasped, but that it is the successive unfolding of the contents of a whole apprehended as such from the beginning. Suppose one knows little about a flower, and one sets to work to learn more, it may be by oneself, it may be under guidance. One's very first apprehension takes the flower as a whole, but a whole in many ways obscure and confused. Its general shape and colour are clear ; its composition is obscure. In other words, not the elements but the whole as such is clearly apprehended first of all, and the aim of learning is to find more and more elements in the whole, and to discover the relations they hold to each other. As the object studied remains a whole, so our thought of it always holds it as a whole, and as we distinguish element after element we yet think them together as well as apart ; not as separate things but as separated constituents of one thing.

Learning is, however, not a set of single acts without bearing on each other, but a continuous life-activity. In considering such examples as the above we are apt to forget this, and so to lose sight of the most important factor of all—habit, which is just as operative in mental as in physical acquisitions. Indeed, the latter are at the same time also the former, and the former always involve the organization of nerve-circuits even when they do not also carry with them series of muscular activities. We acquire skill in learning as truly as we do in acting, and in the same general way. Continued experiences of the same things do not succeed each other like reflexions in a mirror, each leaving no trace of itself. On the contrary, each remains as a contribution to a gradually growing organ of knowledge. It is usually quite impossible to recall to mind the separate experiences, and so

we do not in ordinary speech speak of them as remembered. But really they are retained in the most effective way. Had I to run through a long series of recalled meetings, and then compare the actor in each with the individual before me, before I could recognize a friend, the friendships I could form in life would be very few. And as the same process would be needed before I could recognize any object it is evident that my life could not go on.

What does happen when we recognize a friend? I may safely defy any one of my readers to write down all the evidence. We see a person, it may be only his back, and immediately a thought of our friend prompts our actions: we go up to him and greet him. We do this without any deliberation, and at times we find that our interpretation of what we saw was wrong. But the question now is—What caused the recognition? A whole set of visual impressions related to each other in a certain way and in their combination making a characteristic whole, but by far the greater part of which we are unable to indicate explicitly. So with all recognition: it is the whole, as such a whole, which is recognized, and the recognition is immediate. If we find the characteristic marks at all it is afterwards, and that we generally do only when we have made a mistake, and seek to discover what led us wrong. The following anecdote will bring out the point: "There is in Bristol a church which has a clock without any figures: in the places where the figures should be there is, in each case, a single line; in fact, it looks as if the maker had put twelve ones, instead of the proper figures. I have asked a good many Bristol residents if they had noticed anything peculiar about the figures of the aforesaid clock,

and they have all with one accord replied, 'No ; they are just the same as any other clock.'"¹

Experiments on the recognition of letters and words, whose constituent elements can be separated out with absolute certainty, have added explicit proof. It is found that familiar words are recognized as quickly as single letters when exposed to sight for so small a fraction of a second that only one momentary act of perception is possible, and that longer and more unfamiliar words take but little longer. It is found further that when certain letters only of a word are shown, they are seen as the whole word ; that is, they are not seen to be an incomplete group, but actually the missing letters are perceived. Examination of our recognition of more complex objects, as a friend, bears out the suggestion here made that salient features act as the cue which starts the act of recognition, and that they are not regarded or valued for themselves. Their whole function is that of suggestion or stimulus.

But the signs must be arranged in a certain way. 'Ch r ct r' shown in this form would probably be read as 'character'. But if the order of the letters were wholly changed no such recognition would take place. The same, of course, is true if all the letters of a word are printed, but in a wrong order. If the right order be but little changed we may in a rapid glance fail to notice the deviation from the ordinary form, which as a whole is so little altered that the word is recognized, even as we might recognize a friend though some change in his appearance, such as the removal of a beard, had been made. But if the order depart widely from the correct one recognition is only possible after the letters have been sorted out

¹ Edridge-Green : *Memory and its Cultivation*, p. 150.

and re-arranged. Puzzles which have for their aim the formation of as many words as possible from a given set of letters illustrate the point. The ease with which in reading proofs one overlooks printers' errors shows that the unit of recognition with a practised reader is not even the word but the phrase or sentence. In such a case deviations of words are analogous to deviations of letters in the recognition of single words. The bearing of all this on that perceptual aspect of reading which consists in the recognition of printed symbols is obvious.

Recognition is not always by sight. We hear a voice, and we know that a friend is near though we do not see him. All that is explicit in consciousness is the sound of his speech. But there is implicit a great deal more—a knowledge of his appearance, manner, and customary mode of behaviour. These things are not clearly in mind; in no adequate or definite sense can they ever be so with those who cannot visualize the appearance to sight. They are there as expectations more or less clearly felt, and their presence is most easily detected indirectly by the surprise we feel when they are not fulfilled. If, for example, the occasion leads us to expect to see our friend in evening dress or in academical costume, though we have not had explicit thought of him as so attired we yet feel a shock of surprise if the unformulated expectation is disappointed.

Whatever the expectation may involve implicitly, explicitly it is that we shall see a certain person if we turn in the right direction. The heard voice, then, means to us the friend, because it revives the effect of past experiences as expectations which take a more or less specific form, not according to former experiences but according to the present situation. To hear a clergy-

man's voice at one time may mean to us the preaching of a sermon, at another the delivery of a lecture, at another a friendly chat.

But there is a good deal behind all this, which has resulted from experience but which is not part of the expectation of the present moment, and, therefore, cannot be said to be even implicit in the present thought. Our friend means a good deal more to us than we expect to verify at any one time. We have built up our idea of him as a man ; of his character, his disposition, his oddities, his pursuits, his likings and dislikings, and so on. These are all latent in our knowledge of him ; that is, they enter into the substance of that mental habit which relates us to him. But any of them may be absent from our thought of him on any one occasion, though, of course, on other occasions just those things may be the most prominent.

Our mental habits or organs of knowledge, then, adapt themselves to the occasions which call them forth. In a way my idea or knowledge of my friend is always one and the same ; that is when it is withdrawn in thought from real life and looked at as an abstraction. In another way—and this is the only way in which it is actual and concrete—it is always changing, for the emphasis is now here, now there, as the reference is now to this situation, now to that.

It is evident, however, that the extent of this adaptation is determined by the number of elements to which at one time or another attention has been explicitly directed. For adaptation means that a certain aspect is prominent, and that the relative clearness or obscurity of all others is determined by that. So we see that the total process of learning is to make explicit what is at

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first implicit in thought, and then by familiarization to convert that explicit object of attention into latent knowledge—a part of what we ‘take for granted’, to use Professor Mitchell’s happy expression—whenever we use our knowledge in actual life. It is the recognition of the importance of this last element which led Dr Le Bon to say that “education is the art of converting the conscious into the unconscious.” Much of the ordinary talk about school teaching fails to grasp this and keeps its attention fixed on the conscious contents of the children’s minds, judging those contents by the expression of what is at the time uppermost. This leads to superficiality. In their reaction from the abuse of learning by rote schools have shown a lamentable tendency to substitute intelligent inaccuracy for unintelligent thoroughness. What is wanted is intelligent thoroughness.

Let us look at it in this way. Knowledge is a part of life, and is shown most truly in action. To be able to talk of anything is to *know about* it : to be able to do it, or to use it in our thoughts and acts, is to *know* it. It is the latter at which real learning aims, and the former is of value only as far as it testifies to the existence of the latter. The natural tendency of the school is to rely on the former, and to be satisfied when that is more or less completely secured. That is only an instance of the proneness to deal with words rather than with actualities, and is consequently always to be suspected. Efficiency, however, is a matter of doing, not of talking. To be unable to describe is not of necessity a proof of inability to do. This is evident in all cases of bodily skill, but it is scarcely less true in cases of mental dexterity. A good bowler could not tell another person exactly how

he sends down the balls which are the despair of the batsmen. No matter how much he "bowls with his head," he uses his intelligence to decide the kind of ball he shall send down, not to determine the various muscular movements by which he delivers just that kind of ball and no other. It would be a gross misuse of language to say that he does not know how to bowl such balls because he cannot describe the process in words, and probably has never in thought sorted out the elements of muscular movement involved and made them separately explicit to himself. As combinations of movements and result, distinguished by very slight differences of sensation, he has made them explicit in his practice. Only so could he adapt his movements so nicely to the attainment of the result he desires. His knowledge is the result of a long experience, and by that experience it continually becomes more precise, more sure, and more adaptable. He shows his knowledge in his act, and that act takes a vast amount for granted.

Much of our knowledge remains always in this executive shape, in which the interest is essentially practical : so we may call it practical knowledge. It should be noted that it includes all regulation of conduct, and not simply that kind of controlled action which is commonly termed skill. It is a practical judgement which tells us what to do in certain circumstances, and if the judgement be right and the action good it matters not at all whether it was the implicit adaptation to the situation of an organ of knowledge of such a line of conduct, or the result of a theoretical deliberation ; unless, indeed, the call were for immediate action, in which case it is obvious that the need for the latter alternative is to be regretted.

Generally it may be said that in actual life the practical

judgement is continually called into play; theoretical deliberation only when the situation is beyond the immediate grasp of our pertinent knowledge, and that shows some defect in that knowledge. The time for action is not the time for theoretical consideration, and the function of the latter is to enable the former to take more for granted than it otherwise could.

Our knowledge, then, of anything whatever is never confined to what we have explicit in consciousness at the moment, or even to what is implicit. A great deal we take for granted, and that is not directly under the control of will. We cannot remember it at the time, yet that it was not forgotten is often proved by its explicit recurrence to consciousness at a later time. Most people who have answered examination papers can verify this from their own experience. The process of passing in review all we know of a certain subject, and that of using such knowledge implicitly either in practical life or in thinking, are quite distinct, and it is remarkable that the power to do the former should be regarded as an infallible test of ability to do the latter. To expound the various compositions of forces which are employed in a game of billiards and to be a good billiard player are quite different things. Yet in examinations we continually test only the former kind of power, and so encourage the common but erroneous idea that knowledge is a possession and not a capacity.

I have assumed, what is indeed the truth, that in actual learning attention may be given at will either to things as wholes or to separate qualities and relations of them. It is a common error, but a most mischievous one, to assume that a child does not use general ideas. The mere fact that he has a large number of experiences of

the same person or thing, and that these all become absorbed in his knowledge, means that that knowledge is sufficiently general to cover not only all the divergencies already experienced but others which are not too widely different from them. He sees his mother doing now this, now that; he hears her in affection, in direction, in prohibition, in reproof, or talking to someone not himself. His idea of his mother includes all this: this is all either explicit or implicit or taken for granted in his thought of her at any moment. In other words, his idea of his mother is a general idea though referred to a particular person.

Of course, immediately he learns to speak he finds different objects combined under one name, but not arbitrarily. The name helps him, indeed, but it helps him only along the line of the advance he is already making. The similarities of things which have the same name have been operative in his growing thought, not because he has said to himself "This is like that", but because the *fact* of likeness has caused him to take "this" as something which can be substituted for "that" for certain practical purposes.

Logically, the recognition of things and the practical dealing with them is precedent to general notions of them. But in the actual life of the soul the two are ever present—at any rate after the first few months of life—one being explicitly attended to, the other being implicitly thought or assumed.

Now, the natural interests of the child cause him to value things for their practical uses. Their qualities and relations to each other are thought only in their bearing on the activity in hand. It is essentially the function of the school to intervene in the natural learning-process

in such a way that these qualities and relations may be felt to be worth considering in themselves. This means that the instinct of curiosity should be made independent of that of constructive activity. But the new interest must grow out of the old, or it will be but a sickly plant, if, indeed, it be not a mere artificial parody of the reality.

In the earlier years, as has been seen, the child's interests centre in his own actions. To him the really important question about anything is—"What can I do with it?" But this question shows that the most fundamental general idea which he will need in reaching a knowledge of the reality which surrounds him and of which he forms a part, is already nascent. For he regards himself as an efficient cause, able by his actions to exercise power over something not himself, and so to make such change in it as seems to him good. His frequent failures bring home to him the intractability of matter as well as its tractability, and so develop the idea of things as existing independently of himself, but as opposing his efforts by their own. This idea develops, as we may say, within the implicit apprehension of causality, and in its development it little by little clarifies that apprehension.

Similarly his dealings with things causes the idea of space to grow implicitly as part of his thought of his own actions. He can move some things from one place to another, he can approach others or withdraw further from them. As these acts are done the visual impressions he receives change. So all these experiences grow together into his thought of actions, and any one of them may act as a cue to him to do this or that, in the doing of which he takes for granted more and more of the relations of space as his knowledge grows.

In an analogous way he begins to distinguish past,

present, and future, and that very early. All expectation, no matter how vague, points to the future; all recall, no matter how hazy, refers to the past. Satisfaction, and yet more disappointment, make the expectation definite. What was looked for in the future is now in the present regretted as an unfulfilled longing of the past.

Lastly, long before he learns to count—that is, to attend explicitly to number as such—he has learnt to distinguish as wholes groups which differ in number up to four or five.

Thus, all the fundamental ideas which articulate a general conception of reality are very early operative in the child's thought. They are known implicitly, and that they are so known is shown by the fact that they guide actions. Like the bowler in bowling, so the boy in flying a kite or in whipping a top, shows a working knowledge of certain laws of physics which he acts upon though he does not, and perhaps can not, separately think of them.

To ignore in teaching this very obvious and very important fact is positively to hinder mental development. Constant attention to the insignificant is not the true method of teaching or of learning. Observation of details is carried too far immediately the knowledge of those details is made an end in itself. It never is such an end in the natural and informal learning of the child: he wants to use everything he learns so as to satisfy some impulse or to attain some purpose. Nor is it, according to any rational conception of knowledge. For knowledge means apprehension of meaning, and meaning is found in relation. This, we have seen, is implicit with the child. But it will not be made

sufficiently explicit without the prompting of the teacher. Real advance in learning is the increased ability to think reality as a systematic unity in which every part holds its true place and fulfils its true function. This means explicit apprehension of relations, but not encyclopaedic apprehension of facts. A fact is of worth for knowledge just to the extent to which it has a meaning ; and meaning is, as has been seen, what past experience has enabled us to take for granted. Into a really systematic thought of reality new facts are easily absorbed. And this is true of partial as well as of complete thoughts. Consider the case with which a zoologist sees the function and place of a new species of animal, whether now living or long since extinct.

On the other hand, an undue haste to think relations as such leads to emptiness of knowledge. Too often it has produced systems of supposed reality constructed out of the inner consciousness of some philosopher, and having little affinity with the actual nature of the world. To teach children general ideas as such is to train their minds to be sounding brass and tinkling cymbals.

The illustration supplied by the method of teaching geometry, first by learning statements of the most general truths and afterwards certain applications of those truths will occur to every reader. The empirical modern methods seem in danger of falling into Charybdis in their avoidance of Scylla, and of setting forth a geometry devoid both of precision of idea and of rigidity of proof.

"Proceed from the concrete to the abstract" says the old tag, giving advice incompatible with the other direction to "proceed from the simple to the complex", so far as each is understood in the same reference. For the 'abstract' of the former is the 'simple' of the latter if

the reference be to the matter to be studied. But in truth, no matter how it is interpreted, it is difficult to give this maxim a true meaning. For though attention may be explicitly fixed on a relation or a quality yet the rest of the concrete must be implicitly thought at the same time. On the other hand, when the concrete whole is explicitly attended to its qualities and relations are implicitly held in thought. In each case the whole of knowledge—which is both abstract and concrete—must be thought. The real progress is from a concrete vaguely apprehended to the same concrete more completely known and more exactly thought. True, the means is by a successive study of qualities and relations; but always as qualities and relations of the whole in question, not as independent existences. In a word, knowledge is always of the concrete, for it is always of reality or of a part of reality, and all reality is concrete. But the concrete is a system of relations, each of which may be separately attended to while explicit thought is abstracted from the rest. Thus, every abstract is a partial view of a concrete, and every concrete is a systematic whole in which it is possible to take many such views.

Life, however, is always concrete. It is the doing of real things by a real person amidst real surroundings. And true knowledge is a constituent of life. Knowledge of relation can, then, be nothing more than the explicit attending to relations which are already implicitly known or have already been taken for granted and acted upon. Teaching does not change the nature of the evolution of thought, but only stimulates and accelerates it. It follows that no true teaching of abstract ideas can be given to children who have not a sufficiently wide

and copious practical experience embodying those ideas.

The first function of a school as a teaching institution is, then, to secure that the child's practical knowledge is exact and full. Of course, much of it is acquired out of school, and can only be acquired there. But the school can both systematize that knowledge and make it more definite in its reference.

If our knowledge of things were a set of copies of them and a mere composition of sensations, then the presence of any object to our senses would ensure that we had knowledge of it. That this is not so everyone is well aware. Many things are present to the sight of each one of us daily and yet we get no knowledge of them. Only when we make definite acts of attention do we get knowledge, and acts of attention imply some purpose more or less clearly felt which limits the range of what we notice. Thus, 'the training of the observation' which it is so fashionable now-a-days to recommend to teachers is a very mischievous thing if it mean, as very often it seems to do, an encouragement of indiscriminate looking at all and sundry. From that, indeed, the school has to start, for that kind of scatter-brained observation is natural to young children. But the school's starting-point is not the end of its endeavour. Nor is that end found by simply increasing the range of the child's observations, but rather by developing their character in intensity and accuracy. Truly we have to learn to perceive, and that seems to be one of the most difficult ideas to get into people's minds. "If it was there I must have seen it" men often say, and yet hourly hundreds of things are "there" and we do not see them. Even what we do see we often see wrongly. Every

mistake in recognition is a case in point, and conflict of testimony between two quite truthful eye-witnesses of an event is quite a normal occurrence.

Learning to perceive is learning to concentrate attention on certain things and to ignore everything else. The power of such selection does not come by nature. It has to be laboriously learnt just like any other form of skill. Attention seeks its objects and at first often errs. Gradually more and more signs are absorbed in the growing aptitude, more and more is taken for granted, till the selection of the pertinent is immediate and largely automatic. This is most admirably put by Mr S. E. White in a chapter "On seeing Deer" in his book *The Mountain*—

"In the elimination of the obvious rests the whole secret of seeing deer in the woods.

"In travelling the trail you will notice two things: that a tenderfoot will habitually contemplate the horn of his saddle or the trail a few yards ahead of his horse's nose, with occasionally a look about at the landscape; and the old-timer will be constantly searching the prospect with keen understanding eyes. Now in the occasional glances the tenderfoot takes, his perceptions have room for just so many impressions. When the number is filled out he sees nothing more. Naturally the obvious features of the landscape supply the basis for these impressions. He sees the configuration of the mountains, the nature of their covering, the course of their ravines, first of all. Then if he looks more closely, there catches his eye an odd-shaped rock, a burned black stub, a flowering bush, or some such matter. Anything less striking in its appeal to the attention actually has not room for its recognition. In other words, suppos-

ing that a man has the natural ability to receive \times visual impressions, the tenderfoot fills out his full capacity with the striking features of his surroundings. To be able to see anything more obscure in form or colour, he must naturally put aside from his attention some one or another of these obvious features. He can, for example, look for a particular kind of flower on a side hill only by refusing to see other kinds.

"If this is plain, then, go one step further in the logic of that reasoning. Put yourself in the mental attitude of a man looking for deer. His eye sweeps rapidly over a side hill; so rapidly that you cannot understand how he can have gathered the main features of that hill, let alone concentrate and refine his attention to the seeing of an animal under a bush. As a matter of fact he pays no attention to the main features. He has trained his eye, not so much to see things, as to leave things out. The odd-shaped rock, the charred stub, the bright flowering bush do not exist for him. His eye passes over them as unseeing as yours over the patch of brown or gray that represents his quarry. His attention stops on the unusual, just as does yours; only in his case the unusual is not the obvious. He has succeeded by long training in eliminating that. Therefore he sees deer where you do not. As soon as you can forget the naturally obvious and construct an artificially obvious, then you too will see deer.

"These animals are strangely invisible to the untrained eye even when they are standing 'in plain sight.' You can look straight at them, and not see them at all. Then some old woodman lets you sight over his finger exactly to the spot. At once the figure of the deer fairly leaps into vision. I know of no more perfect example of the

instantaneous than this. You are filled with astonishment that you could for a moment have avoided seeing it. And yet next time you will in all probability repeat just this 'puzzle picture' experience....

"To enjoy the finer savour of seeing deer, you should start out definitely with that object in view. Thus you have opportunity for the display of a certain finer woodcraft. You must know where the objects of your search are likely to be found, and that depends on the time of year, the time of day, their age, their sex, a hundred little things."

Here we have the whole theory of perception described in a case in which it is impossible to avoid recognizing that the power is only attained as the result of much learning through practice. The essence of that power is the ability to ignore and omit by far the greater part of what is present. The perceptive activity is dominated throughout by the purpose in hand, and under that guidance the organ of knowledge adapts itself with great nicety and nearly automatically to the demands of the occasion. The observation is good in proportion as it is *not* diffuse. When this is grasped—and the reader will do well to examine examples from his own experience of successful and unsuccessful looking for things—the futility of cultivating gaping under the cloak of training the observation becomes evident. That process, so far from developing a faculty of fruitful, that is, purposive, observation, forms and strengthens its very antithesis—the habit of glancing at everything and really seeing nothing. It is plain, too, that nobody can train the observation even of a child in matters of which his own knowledge is essentially superficial.

In these practical matters one feels the growth of

one's knowledge and capacity because one can *do* better what one wishes to do. This consciousness of increasing power is itself one of the greatest and most spontaneous delights of life—a delight especially felt by the young—and is itself a sufficient motive to action independently of the result the action actually attains. This we see in every boy engaged in manual construction, practising at the nets, or, indeed, engaged in any occupation which demands skill. He finds delight in the activity and not only in the result. This again is well illustrated by Mr White in the chapter from which I have already quoted—

“Suppose you’ve been climbing a mountain late in the afternoon when the sun is on the other side of it. It is a mountain of big boulders, loose little stones, thorny bushes. The slightest misstep would send pebbles rattling, brush rustling ; but you have gone all the way without making that misstep. This is quite a feat. It means that you’ve known all about every footstep you’ve taken. That would be business enough for most people, wouldn’t it? But in addition you’ve managed to *see everything* on that side of the mountain—especially patches of brown. You’ve seen lots of patches of brown, and you’ve examined each one of them. Besides that, you’ve heard lots of little rustlings, and you’ve identified each one of them. To do all these things well keys your nerves to a high tension, doesn’t it? And then near the top you look up from your last noiseless step to see in the brush a very dim patch of brown. If you hadn’t been looking so hard, you surely wouldn’t have made it out. Perhaps, if you’re not humble-minded, you may reflect that most people wouldn’t have seen it at all. You whistle once sharply.

The patch of brown defines itself. Your heart gives one big jump. You know that you have but the briefest moment, the tiniest fraction of time, to hold the white bead of your rifle motionless and to press the trigger. It has to be done *very* steadily, at that distance,—and you out of breath, with your nerves keyed high in the tension of such caution.... The reason I can bear to kill deer is because, to kill deer, you must accomplish a skilful elimination of the obvious.”

Only by careful practice does our perceptual knowledge attain clearness and precision—a clearness and precision shown in our practical use of it, not in our talking about it. Evidently only from such clear and precise knowledge can we develop clear and precise thought of qualities and relations. Our concepts or general ideas cannot be more accurate than the perceptual knowledge in which they are studied.

Apply this to certain traditional methods of teaching. A short time ago I was showing a party of some score of boys of eleven to thirteen years old over an old abbey, and I asked them to estimate the length of the ruined church. Only one was approximately right, the others without exception estimated it at less than half its actual length. These boys could work all sorts of sums involving questions of length and area. What relation can such exercises have to their real life when the numbers are so devoid of real and true meaning for them? The general and abstract relations of numbers which we call Arithmetic are significant to a child exactly in the degree to which they can be referred to real experiences of movement. From such experiences they must, therefore, be developed if the teaching of arithmetic is to be more than a drill in the more or less skilful manipulation

of the elements of an artificial world of empty names and symbols.

So it is with geometry. The aim is to examine certain relations of space, and to do this the relations must be attended to by themselves and apart from things in which they are embodied. But they must be implicitly known as embodied before even a beginning can be made with considering them apart. The mind which is to consider them must be the mind to find them where alone they can be found—in the real world of experience.

Perceptual knowledge is the result of doing, and its test is in doing. Let us apply that to the study of form and colour. There is a doing by the eye in both cases. So there is in such a series of perceptual acts as was described in the last extract from Mr White. But that series was made real by being experienced not only by sight but by climbing. Similarly, the visual perception of form is made more exact and explicit by modelling and drawing, and that of colour by painting. I am not speaking now of these exercises as developing artistic taste, but simply as helping and expressing visual perceptions. I have seen two sets of drawings from two neighbouring schools produced by children of six or seven years of age, who had been given similar amounts of instruction in drawing. The one class had from the first drawn the objects they were attending to by sight, and had been led to look for inaccuracies in representation and to correct them. The other poor little souls had been put through the weary and soul-killing drill of lines straight and curved, representing nothing in heaven or in earth. In each case a lady teacher was asked to stand before the class, and the children were told to draw a picture of their teacher. The former

produced quite respectable sketches showing the characteristic features of dress and attitude. The latter sent in nothing but the outline skeletons which are characteristic of the untrained drawings of young children and of savages. In other words the lessons they had undergone in drawing had not advanced them one single step in the power of representing by the pencil the appearance an object present to sight. Translate this into the language of our present subject and there can remain no doubt that the former children had learnt to see more and to see better than the latter. In no way can we avoid the conclusion except by assuming that to see is only to use the eyes and not yet more to exercise the intellectual power of noticing distinctive marks.

Similar remarks apply to the assistance given by painting to the discrimination of colours. This is by no means a mere matter of sight. No young child, no matter how excellent his eyes, can discriminate all the shades which to an adult are quite distinct. The effort to match the colours of the paints with those of the object to be copied means the very definite fixing of attention on that point, and concentration of attention is the one and only mode of securing increased accuracy and precision.

All ideas of natural objects and phenomena must similarly be founded in accurate observation. Often the children have already made some observations of the facts required ; it is for the school to make those observations more purposeful, more exact, more systematic. "Few [young children] have not seen at least a small brook ; but many vague and often erroneous notions have probably found their way into their minds through lack of guidance in observing. They have probably an

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exaggerated notion of the permanence, not only of its general form, but even of details, such as the pebbles in its course and the soil on its banks. They assume uniformity where there is really diversity, as, for instance, they imagine its course to be normally straight, whereas bends are the rule, and straightness the exception ; they suppose the rate of flow to be uniform, both as regards various parts of its course, and as regards the cross-section at any point ; and they project the width and depth of the point at which they are most familiar with it, both to its higher and its lower reaches. These wrong impressions concerning the local stream will naturally be transferred to their idea of the larger rivers of which they hear in the Geography lesson. The work of [teaching] will be devoted to correcting these false impressions by sight of the actual facts, and by such guidance in their observations as will lead them to notice what might otherwise pass unnoticed.”¹

The points to which explicit attention is directed will necessarily vary with the psychological age of the children, and with the amount of cognate knowledge they already possess. Every real challenge to enquiry is in the form of an unexpected difference. Thus discrimination proceeds step by step. A child who cannot distinguish red from yellow certainly cannot perceive orange as different from both and intermediate between them. So such observations on a stream as are suggested in the passage quoted would at first be purely qualitative. Only, for example, when it is seen that speed does vary will the problem of measuring the different rates arise.

If the doctrine of the preceding pages be accepted it

¹ Archer, Lewis, and Chapman : *The Teaching of Geography in Elementary Schools*, 121-122

will, like other doctrines, be seen in practice. Schools are too bookish, and in that they are so they defeat their own object. Granted that that object is to give their pupils systematic knowledge, and that systematic knowledge of necessity involves the study of abstract relations, yet it is now clear that the best progress will be made by following the natural order by which such relations are developed in concrete experience. Then from the very first they are full of meaning, and meaning really implies some form of usefulness. The knowledge of them thus gained is real, because it results from the normal working of the intelligence in solving the problems life presents to it. Of course, without the school many of these problems would never have been presented in such a way as to evoke desire and effort for their solution. That gives the teacher the fundamental criterion of the value both of the subject-matter and of the form of his teaching. But to insist on the study of abstractions which are presented to the minds of the pupils as arising in a vacuum, and which suggest no problem felt as an intellectual need, is to strangle curiosity, to starve the desire for knowledge, and to turn the ordinary healthy mind from such skeletons to the real interests of life. Thus it has come to pass that the out-of-school interests have often been a boy's only salvation from intellectual atrophy, and that many of those men who have made the greatest advances in human knowledge have had no connexion with the orthodox places of instruction. School and life must be in the closest contact if school is to do its true work.

The direct study of things is, then, needful from two points of view—as bearing on those practical activities which make up so much of life ; and as providing occa-

sions for the development of theoretical interest, or the desire to know because to know is itself a human good. This conceptual knowledge begins to arise whenever in thought we set ourselves to examine the qualities of an object separately. In perceptual knowledge each thing is taken as a whole, and what we so unify depends on the object in view. A 'thing,' for example, may be a school, a class, a boy, or a boy's arm or hand or finger, according as the practical activity is concerned with one or other of these groups. For always a 'thing' is a group in the sense that from it we can get a variety of impressions. In practical activity the group is the unit, and it is as a whole that it prompts to further action. So in climbing a mountain-side a stone is a thing on which one can place one's foot, and its relation to the rest of the slope suggests the next movement. We are not then interested in the composition or origin of the stone, but only in its function as a support. When, however, there is no such practical end in view, or when its accomplishment is not pressing, the interest may be drawn to the stone itself. A geologist's attention, for instance, may be awakened by such a stone, so that for the time his practical purpose of getting up the mountain falls into abeyance, and the theoretical purpose of finding out the stone's nature and origin takes its place.

In every case such a theoretical purpose involves a different attitude of mind from that in a practical purpose. The object is no longer a unit amid other units and related to them in terms of the practical activity of the moment. It is now a system in itself, and the question is as to the composition of this system. This means that we hold apart in thought what is not separated in space or in time. In perception each object is

seen as separate in space from every other, and as in some definite relation to it. So the objects come into the practical experience successively in time. But when we separate in thought the colour from the form of an object we hold apart as objects of attention what in reality are never apart. Nor is the separation absolute. While form is explicit colour is implicit, though, it may be, only in the vaguest and faintest way. So, although we may attend to form and to colour successively, yet we are aware that they co-exist in time as well as in space.

Such concentration of attention on an element which cannot be detached in space or time from the system of which it forms a part is much aided by the use of language, if, indeed, it would be possible without such help. A sign of some sort to give a kind of artificial independence to each element seems necessary, and such signs are given, most conveniently to most of us, by words. If I can mark the colour of the grass by the word 'green' and the colour of an ivy-leaf by the same word I am greatly helped in relating the two colours, irrespective of the great differences in general appearance of grass and ivy. Generally it may be said that comparison and the noting of difference is the mode in which the general ideas connoted by words become precise and explicit.

There is, however, a danger in this use of words. Words are themselves separate objects of perception; as such we see them printed or hear them uttered. So we are apt to attribute a similar independence to the qualities they name. The step from this to imagining things as built up of their qualities, as a wall is built up of bricks, is an easy one. The results of taking it are,

as has already been said, fatal to any true idea of knowledge.

A further result is yet more disastrous. General terms are looked upon as signs not only of the existence of certain qualities in things, but as implying some other kind of existence of which each is the name in the same way as 'Queen Elizabeth' was the name of an actual person. So duty and virtue are regarded as existing in this world of shadows instead of being found—and found only—in definite concrete acts. But, so far as we can ever know, the only existence corresponding to a general term is the presence of a certain quality or set of qualities, relation or set of relations, in the real things of the world, all of which are objects of concrete perceptual knowledge. The world of conceptions is the mode in which we think the real world of experience, not another, a higher and sublimated world, whose relations to the real world of things and deeds is shadowy if not unknown. If this be grasped it will surely be impossible to try to teach abstractions apart from perceptual reality and out of connexion with it.

All theoretical knowledge, then, begins with analysis of a thing into its qualities, and the result is an idea which is potentially general. It is used in a general way—that is, as applicable to other things of the same kind—long before it is consciously thought as general. A child will, indeed, generalize his terms too widely, and will call every man 'papa' or every flower a 'rose', certainly not because he has analysed and found general qualities, but simply because he has no appreciation of the differences which exclude things from the range of a term which applies to other things in some way similar. When this stage is passed a very little similarity will

still lead a child to use a term generally. But it is only when the similarity has been definitely attended to that this extension of the application of the term is conscious. To think the term as general, apart from any immediate call for its application, is to take the further step of making explicit the generality which before was implicit. It is the same mental process as we have already traced in perception, but it is now exercised on objects separated by thought and not by mode of existence.

This further step grows out of comparison, or the noting of similarities. It must be remembered that similarity is implicitly operative long before it is itself made the object of explicit thought. Throughout life this is so. We often class things together on account of a felt similarity without asking ourselves in what the similarity consists. Indeed, this is nearly always so in class recognition as distinguished from individual recognition. We feel no hesitation in saying of an object we have never seen before that it is a church or a watch, and in such cases we do not set before ourselves its qualities side by side with those remembered as belonging to other churches or watches. Similarly, if we see a box which we wish to open we assume it to be like other boxes in that respect. It is only when we are balked that we set ourselves to examine this special box to see in what way its resemblance to other boxes fails. The discovery of the difference does not destroy our general idea of a box, nor does it limit it. On the contrary it enriches it, as we now include in it a new possibility of mode of opening in addition to those we already knew.

Here again we are brought face to face with a danger arising from the use of language. We find it con-

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venient to express the most essential marks of a general idea in words, and we call the statement a 'definition'. Then we are apt to think the definition is a statement of the meaning. But a definition can only state qualities which are found in every instance of the general term, and that in the same general form. So any quality in which a variation is found must be excluded. For example, as not all tables are square, 'square' cannot be part of the definition of table. Nor, for the same reason, can any other shape; and yet every table must have shape, and some shapes would be felt to be excluded. It follows that the more variations we know the more meagre becomes our definition. But at the same time the fuller becomes the implicit meaning of the term, and the more knowledge we take for granted in using it. A definition, then, is a purely artificial skeleton of meaning, not the real living tissue of meaning which alone can function in the life of the soul.

The bearing of this on much common teaching is obvious. The teacher too often confuses definition with meaning, and as a result teaches mere empty words. Meaning comes only from experience; definition may be taught to a parrot, and it would be little more difficult to teach young children definitions in Greek or in Chinese than to teach them in English when the definitions are not the outcome of their own thought on their own lives, and the result would be nearly, if not quite, as valuable. Almost every 'howler' in an examination paper is an indication that the child has tried to learn symbols which to him symbolized no living reality.

No examination into the nature of objects goes far without bringing into prominence some relations to other objects. These, as has been seen, are all implicit

in practical knowledge. The most important of them is causation, and this is very early the object of interest, because it lies at the root of success in every thing the child attempts to do. Yet there are writers who tell us that a child cannot grasp the causal relation. That he is unable to understand it as a metaphysical conception we gladly grant. So, to say the least, is the vast majority of adults. But as a practical idea it is clear enough to him, and nothing delights him more than to discover the causal bond in any particular case in which he is interested.

The natural appetite for effective knowledge of cause should be fed and encouraged in every possible way. But it cannot be satisfied with words; they only drug it. If a boy desire to know the cause of any event it is because he already knows something of the nature of that event and wants to know more. This more he should discover for himself. The utmost a wise teacher will do will be to suggest lines of enquiry. Unless the boy conduct the enquiry the whole process is worthless as a development of efficiency in thought. It is in this regard that so much 'science teaching' fails to be scientific teaching. Boys work indeed in laboratories, but they commonly work under so minute direction that they never feel the spur of an unsolved problem. Consequently they never exercise analytic thought in an attempt to solve such a problem. They manipulate apparatus, which often embodies a whole system of knowledge of which they are ignorant and which consequently they could not have invented for themselves, and they watch results. The whole process is purely perceptual, and as a perceptual process it is open to the charge that it concentrates attention on the

insignificant, and does so with the greatest possible waste of time. Laboratory work is only profitable when it is a definite and conscious seeking by each individual pupil of the answer to a problem which he himself has felt as such, though probably he would not have so felt it without his teacher's suggestions. If a pupil is not old enough to work in this way he is not old enough to work in a laboratory at all; there is much more profitable work which he can do outside.

The use of complicated apparatus in a school laboratory is to be deprecated whenever the pupils are too young to grasp the systems of knowledge embodied in them. A great difficulty in scientific advance is always the invention of apparatus fitted to test a hypothesis. The great discoverers have always at first used apparatus which, as compared with later developments, was simple and rough. Scientific advance means increased perfection of apparatus as well as of thought. With rough apparatus no doubt the results are rough. But the educative aim is not a precise result in the demonstration, but improvement in the capacity of the pupil. To advance along the actual lines on which knowledge of science has advanced, to follow in the footsteps of the great pioneers, gives, moreover, a human stimulus which is otherwise wanting. If a student feel that he is confronted with a problem with which Faraday was confronted the character of his work as an advance into new fields of knowledge is much more apparent to him. Yea, and his failure to succeed where Faraday did succeed will be a wholesome curb to the spirit which is apt to be developed by exhortations—too often given—to believe only on the evidence of his own experience. Let him learn that

"knowledge means

Ever-renewed assurance by defeat

That victory is somehow still to reach."¹

Nowhere, perhaps, do we see the evils of seeking the effect of instruction on the side of the matter so plainly as in much of the teaching of science. The visible 'result' which can be directly appreciated is accepted as a substitute for, or at least as a measure of, the educative result in the development of mental efficiency which it seems so hard to gauge. Yet really it is not so. Increased efficiency shows itself in increased power to do appropriate things. A boy's real advance in any course of lessons, whether in 'science' or in any other subject, is exactly measured by his power to work independently of guidance in that subject.

All knowledge, then, is one. Whether we look at it perceptually or consider it conceptually it is the understanding of our own experience. Separated from that it is nothing. If it enter not into our lives it is of no effect. Its explicit forms alternate according to the needs of the moment—now we dwell on the actual doing, now on the theoretical considerations. But whichever is foremost in thought the other aspect is in the background. Moreover, we have seen that growth in knowledge does not mean the amassing of an increasing heap of facts, but a richer, more vigorous, and more powerful organ of knowledge—of matter which we take for granted and which operates immediately and efficiently in giving meaning and direction to our lives.

It is in this indiscriminated manner that most of our personal experiences are retained and recalled. The explicit setting before consciousness of a memory of

¹ Browning : *A Pillar at Sebzevar*.

some definite past act or event is exceptional. Only a very small proportion of our doings and sufferings are thus individualized. Let the reader test this by trying to recall the sequence of his acts and thoughts during the last week. He will find that comparatively few of them can be made explicit. He may be able to say generally what he did on a certain day, but much of this is inference from the habitual ordering of his life. He went to school and taught, and he will remember in general outline what he taught. Even this he finds himself unable to do if he take for consideration a day in a more remote past. He may possibly know that on a definite day ten years ago he went to school and taught, but he knows it, not because he recalls the event as such, but because he knows the routine of his life at the time and does not remember any deviation from it. We remember deviations from routine because, being exceptional, they arrest more attention to themselves, and thus add a vividness and intensity to the experience. "Per-versely enough the times when you did *not* see deer are more apt to remain vivid in your memory than the times when you did", says Mr White in the chapter from which I have already quoted. This is only an example of the general rule that what impresses us most at the time is most easily recalled. Disappointment by its emotional shock adds enormously to the impression made by the event. It is the unnatural and unexpected outcome of a process of activity intended to secure quite another end. So the even flow of mental life is broken and checked, and such arrest makes a deep impression. Similarly, a person will remember vividly an occasion on which he made himself conspicuous by some breach of the conventionalities, while he will forget innumerable

instances in which he fell into no such unpleasant mistake.

Much of our definite recall of our past is, then, a construction, in which a few really recalled events are built into a framework of general knowledge of the habitual ordering of life. So it is that the older we get the less we remember the ordinary every-day events as such. They have become matters of routine and of habit, and so no special call on the attention has been required to secure that they were done. We remember an illness because it broke such routine as well as because its value for our emotional life caused it to make a deep impression on us. But we do not remember the common round of duties done and tasks fulfilled except as a pervading feeling of self-satisfaction.

Such schematic recall is obviously subject to inaccuracy. If a variation was not important or striking it may be forgotten, and we may believe that no deviation from routine took place. Here we have one cause of the mistakes of memory. What happened is not recalled, but assumed as an inference from a general rule which in this case did not wholly apply. Or, on the other hand, the exceptional is assumed to have been the normal. Thus are explained the beliefs of many old people that in their childhood all English winters were full of snow and frost, and all summers warm and sunny—a belief in no way borne out by meteorological records.

A yet more serious source of error is that, quite unconsciously to ourselves, we may colour the events of the past and fill in details from imagination, or even substitute imaginations for the actual. This may be, and often is, also done deliberately. Every case of lying about one's experiences is such a falsification in the

communication of the products of memory. And repetition of the false may in time become so familiar that it is even mistaken for the true. To deceive others is a first step towards deceiving ourselves. But so long as we know we are falsifying it cannot be said that our memory is at fault. Frequently, however, this is really the case ; and what is imagined is, quite unintentionally, substituted for what should be remembered. Many of the false statements of children originate in this way. Their imaginations are vivid, and the distinction between their images and the real world is not so clear-cut as is ours. So they romance in good faith. Of course, habit counts here as elsewhere, and the educator is evidently called upon to bring home the inaccuracy whenever he detects it, and to insist on precision of statement in all narratives and descriptions. Such an evil habit as exaggeration, to which untrained minds are peculiarly liable, should be checked ; for it leads to a failure to realize exactly what truth is, and strengthens the tendency to make loose statements, which itself reacts on the inner life and cultivates loose and inaccurate thinking.

The belief that a child must surely and easily recall anything it has done is, therefore, for all these several reasons, devoid of foundation. The ordinary mode in which memory works with our past is quite otherwise. It is by strengthening and developing appropriate organs of knowledge, or habits of thought. In such organs the individuality of the acts is lost. Each is absorbed in the whole and plays its part in that whole. Repetition of an act promotes not the ability to recall the separate acts but the power to do the act easily and well. Repetition forms habits, and habits are organs of knowledge which operate as wholes and in which attention is no

longer paid to the detailed doing. And this is well. Effective life does not consist in re-living the past but in grappling with the present. The value to us of our past is to make this grappling more successful. So the proof of learning is increased ability to do.

Again, then, we see that facts and separate experiences are of value to us not in themselves and as individual possessions but as nutriment. Personal experiences may be forgotten in the sense that we cannot recall them individually. They are never forgotten in the sense that they leave no trace behind.

When definite personal experiences *are* recalled the recall is in its essence a bringing to mind of certain relations between ourselves and some part of our surroundings. This may, or may not, be accompanied by a visual image of the event. One person will see a mental picture of himself missing the deer and of the animal fleeing away. Another will remember his failure just as vividly, and yet have no such mental picture or only a very vague and blurred one. The event, as an event, is remembered with equal clearness in each case. But in the former the recall of the scene is undoubtedly more particular. The setting of the event stands out distinctly, while in the other case this setting is remembered only in the kind of schematic way which can be expressed in words. It may be noted that the former mode of recall gives much the greater scope for the confusion of real memory with imaginative substitutions. So long as the picture as a whole satisfies by its familiarity the details are largely accepted as equally certain. Very detailed recall is not the same thing as very accurate recall.

So with the other senses. One musician may recall a piece of music as he heard it, and, indeed, hear it again

in imagination. Another may recall it more as an intellectual construction than as an emotional reception, though this seems to be less common.

When a class of children is set to reproduce from memory a drawing of something they have already drawn in the presence of the object, one child may see the object visually and copy his visual picture ; another may reproduce mainly by remembrance of the movements of the hand, and a kind of geometrical grasp of the space relations involved. The latter will be unlikely to produce as convincing a drawing as the former, because the result of his efforts will probably be little more than a general schematic sketch of that kind of object. The former will present an individual object even though some of the details are different from those in the model. So this looks more true to reality, especially when the original is not available for comparison. Such an example makes it clear why we tend to be impressed by the apparent truth of a statement of past happenings which is marked by much consistent detail. Yet some of that detail is practically certain to be the product of conscious or unconscious imagination. Often even the narrator is unable to distinguish between these details and those which are really remembered. Practically it is much safer to trust to our memory that a certain event *did* happen than to trust to our present impression of exactly *how* it happened.

The motor memory just spoken of may be trained to considerable accuracy within its own general limits. I myself, for example, can draw from memory a very fair sketch map of almost any part of the world, though I cannot see a mental picture of any kind. This, however, has only resulted from much practice in map-

drawing in earlier years. If I set myself to draw such a common object as a hen or a horse, I immediately become aware how schematic is my memory of such familiar forms and how unable I am to indicate with any accuracy their particular features. From my own experience I should judge that defect in the power to visualize is correlative with a tendency to general rather than specific observation. So it comes about that the organs of knowledge which enable one to recognize one's surroundings are very general, and one has great difficulty in recognizing particular persons or things, unless one sees them very frequently, and sometimes even then. Dr Edridge-Green records the case of "a professional man of exceptional ability" who "fails most lamentably to remember names or forms. So great is his deficiency... that he is unable to recognize his best friends (until they speak). He has got into an omnibus and sat opposite his mother, and thought to himself that he seemed to know her face. He has met his brother or sister in the street, looked them straight in the face, and failed to recognize them. He says that he should not like to have to identify his wife in a court of law (if he had to judge of her by her features), and thinks it incredible how a witness can swear to another person.... He has the same difficulty in remembering names, and finds the greatest trouble in recollecting them, until they become associated with a definite idea or fact."¹ This extreme case has been a source of comfort to me ever since I first read of it.

It is evident, then, that the cultivation of distinct memories is limited by innate capacity. But it is essentially the recall of particulars as such which is affected.

¹ *Memory and its Cultivation*, pp. 97-98.

The formation of the all-important organs of knowledge is not, I believe, hindered by such defects as inability to visualize. But the power of definite recall of personal experiences cannot be cultivated equally in all individuals.

Nor is such a power by itself an unmixed blessing. Like a highly developed habit of observing as many items as possible in the surroundings, a highly cultivated power of recalling the items of the past may positively encumber the path of effective thought. As has been seen, it is in the pertinence of knowledge to the present situation that its value lies. A memory very tenacious of details is apt to bring up before the mind events trivial and important, pertinent and impertinent, just as they occurred. Such a perceptual memory is happily illustrated in Miss Bates, a character in Jane Austen's *Emma*. As a fair specimen of her conversation we may take the following :

"I was so astonished when she first told me what she had been saying to Mrs Elton, and when Mrs Elton at the same moment came congratulating me upon it! It was before tea—stay—no, it could not be before tea, because we were just going to cards—and yet it was before tea, because I remember thinking—Oh, no, now I recollect, now I have it: something happened before tea, but not that. Mr Elton was called out of the room before tea, old John Abdy's son wanted to speak with him. Poor old John—I have a great regard for him; he was clerk to my poor father twenty-seven years; and, now, poor old man, he is bedridden, and very poorly with the rheumatic gout in his joints—I must go and see him to-day; and so will Jane, I am sure, if she gets out at all. And poor John's son came to talk to Mr Elton about relief from the parish: he is

very well-to-do himself, you know, being head man at the Crown—ostler, and everything of that sort—but still he cannot keep his father without some help; and so, when Mr Elton came back, he told us what John ostler had been telling him, and then it came out about the chaise having been sent to Randalls to take Mr Frank Churchill to Richmond. That was what happened before tea. It was after tea that Jane spoke to Mrs Elton.”¹

Still worse is the discursive memory which, equally trivial in its contents, has not even the merit of keeping to the attempt to recollect a definite event. Such recall is as unguided by any intelligent purpose as is the most vagrant of reveries. It is, indeed, spoken reverie. Perhaps the best example of this in fiction is Mrs Nickleby. Thus she meanders on:

“‘Kate, my dear,’ said Mrs Nickleby; ‘I don’t know how it is, but a fine warm summer day like this, with the birds singing in every direction, always puts me in mind of roast pig, with sage and onion sauce, and made gravy.’

‘That’s a curious association of ideas, is it not, mama?’

‘Upon my word, my dear, I don’t know,’ replied Mrs Nickleby. ‘Roast pig; let me see. On the day five weeks after you were christened, we had a roast—no, that couldn’t have been a pig, either, because I recollect there were a pair of them to carve, and your poor papa and I could never have thought of sitting down to two pigs—they must have been partridges. Roast pig! I hardly think we ever could have had one, now I come to remember, for your papa could never bear the sight of them in the shops, and used to say that they always

¹ Chap. 44.

put him in mind of very little babies, only the pigs had much fairer complexions ; and he had a horror of little babies, too, because he couldn't very well afford any increase to his family, and had a natural dislike to the subject. It's very odd now, what can have put that in my head ! I recollect dining once at Mrs Bevan's, in that broad street round the corner by the coachmaker's, where the tipsy man fell through the cellar-flap of an empty house nearly a week before the quarter-day, and wasn't found till the new tenant went in—and we had roast pig there. It must be that, I think, that reminds me of it, especially as there was a little bird in the room that would keep on singing all the time of dinner—at least, not a little bird, for it was a parrot, and he didn't sing exactly, for he talked and swore dreadfully ; but I think it must be that. Indeed I am sure it must.'"¹

Such memories are by no means uncommon. Indeed, when one hears an uneducated person, especially a woman, relating a conversation, one notes how frequently come the 'said he' 'I said' 'she said.' There is no power to give the gist of what was said, but only to go through it in all its pettiness, and that seldom or never without conscious or unconscious distortion.

When one considers such memories one sees that they simply waste life. The trivialities recalled are not of sufficient worth to justify their occupying two spaces of time. The first occasion cannot, perhaps, be avoided ; the second can. Doubtless, too, the indulgence in this kind of reminiscence strengthens the tendency to be interested in the infinitesimally unimportant and to neglect any meaning of things which does not lie on the surface.

¹ Dickens : *Nicholas Nickleby*, ch. 41.

The great truth which such considerations bring home to us is, it seems to me, the value and the blessedness of forgetting. Very few of our past experiences are worth recalling as such; their true legacy is in our increased power.

Yet forgetting is not wholly in our power. That fact, too, has a value for life. For the things which we find it quite impossible to forget are generally those which stand as warnings and sign-posts to direct us on our way. They are the experiences which had a strong emotional effect upon us at the time, and this usually means that they had an important bearing on our lives.

The one common characteristic of the personal experiences which each one of us remembers is seen here. They are all experiences which intensely interested us in some way—often a very unpleasant way. This is, of course, only a special case of the rule which finds its most general application in the fact that we advance best in the knowledge of what interests us. The general experiences in an interesting activity grow together into the strong common tendency or aptitude; the exceptionally vivid ones not only affect this but gain a kind of more or less permanent independence of their own. What one is interested in one observes and attends to; consequently one remembers it more or less distinctly for a longer or shorter time.

In the course of life we have many interesting experiences, and they are not all of one type. Naturally we recall at any moment those which agree most closely with the dominant note of our intellectual life at the present. If I am talking or thinking about art I shall recall some of my experiences of picture and sculpture galleries, and the longer the topic engrosses my mind the more of

such reminiscences will stand more or less explicitly and clearly before me. This means that the mental life is so far organized that experiences relating to the same kind of topic have become connected together. The more perfect the organization, therefore, the more fruitful will be the effort to recall. Such organization can, however, only come from attentive study of the relations which exist between the cognate items of experience. So we see again that power of pertinent recall is not only attention working in a definite sphere at the present, but that it also implies a previous synthesis of the contents of that sphere in the past.

Specially important is the influence of emotional tone in determining the kind of experiences recalled. If I am joyous I naturally dwell on reminiscences of past happiness; if I am sad I with equal facility revive my former sorrows. In either case it would be practically impossible to recall the other class of experiences: their emotional nature is incompatible with the present emotional tone, and they can enter consciousness only if that tone be changed. True, when I am sorrowful I may remember that at former times I have been glad, but this is not recalled as gladness, but rather by contrast to deepen the present grief. So, too, events in themselves indifferent may be given a very definite emotional colour if they be recalled in a state of violent passion, such as jealousy, anger, or love.

It follows that my power of recalling my past experiences depends on my mental preoccupation and on my emotional tone. What I can recall at one time I cannot recall at another. "The memory has as many moods as the temper, and shifts its scenery like a diorama."¹

¹ George Eliot : *Middlemarch*, ch. 53.

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Moreover, as my interests differ from those of others, so the kinds of things I naturally remember are those another will equally naturally forget. "Let four men make a tour in Europe. One will bring home only picturesque impressions—costumes and colours, parks and views and works of architecture, pictures and statues. To another all this will be non-existent; and distances and prices, populations and drainage-arrangements, door- and window-fastenings, and other useful statistics will take their place. A third will give a rich account of the theatres, restaurants, and public balls, and naught beside; whilst the fourth will perhaps have been so wrapped in his own subjective broodings as to tell little more than a few names of places through which he passed. Each has selected, out of the same mass of presented objects, those which suited his private interest and has made his experience thereby."¹

It is now plain how much it obscures the facts to speak of memory as if it were an independent power, able to deal equally well and quite mechanically with anything entrusted to it, and only needing to be exercised in any one department of learning to grow strong for all. We all have many memories, even in reference to our own personal lives, and some of these are stronger than others: we all remember some kinds of experience better than others. But memory is nothing mysterious. It is simply attention directed to the past, and, like attention directed to the present, it works in the sphere of interest and under the guidance of purpose.

It is evident, then, that to deepen interest is to improve memory for that in which the interest is felt. Further, it has been seen that the mere memory of facts, with no

¹ James: *Principles of Psychology*, vol. i., pp. 286-287.

selection on grounds of importance or pertinence, and with no systematization according to their bearing on each other and on the occasion which calls them forth, is of very small value at any time, and far more often is a positive hindrance to effective thought or action.

The training of the memory is, therefore, essentially a training in power of synthesis and of seeing relations of worth and pertinence. To practise children in giving detailed relations of their experiences—as in the ridiculous proposal I once saw that every day they should be asked to enumerate in detailed sequence the things and persons they had passed on their way to school—is to take a very certain way of equipping them with the worst possible mental habits both of attention to the present and of making use of the past. On the contrary, everything which exercises them in judicious selection, rejection, and arrangement of their remembered experiences round certain topics, is of value; for it really trains the mind in that critical power of dealing with its thoughts which is the very essence of good judgement and which, like other mental powers, with wise practice becomes largely automatic.

At the same time it should be borne in mind by every teacher that only so far as a past experience is helpful for the present situation is it worth recalling, and that the great majority of such experiences do their appropriate service without enjoying an individual immortality.

CHAPTER X

LEARNING THROUGH COMMUNICATED EXPERIENCE

THE very meaning of education is that the young should profit by the wisdom, knowledge, and experience of their elders, and the chief function of schools is to make that profit as great as possible. The fact that we are by nature social and are all born into a social environment would by itself ensure that we are helped by others in the guidance of our lives. Our innate sociability prompts us to assimilate our conduct to theirs, to accept their views, and generally to mould ourselves upon them.

The very learning to speak is at the same time a learning of the thoughts of those around us. Even words imply classifications of the objects of experience, and we learn speech not in words but in statements, commands, directions, and expressions of approval and disapproval. So the child accepts the judgements of value on things and acts which are current in his little circle, and learns to regulate his doings not only by explicit directions and prohibitions but through the description of acts as right or wrong, good or naughty. He learns too, with equal unconsciousness, many of the more common relations of familiar things to each other and to himself. He is warned that fire burns, and that

he must not simply avoid touching it but must refrain from putting many things in close neighbourhood to it ; that clothes may be torn and spoilt by spilling ink upon them ; that porcelain is breakable. No doubt personal experience would bring most or all of these home to him in particular cases, but the instructions and prohibitions of his elders accelerate such learning as well as make it more definite.

There is, then, much informal learning from others going on from almost the beginning of life, just as there is much informal learning by personal experience. The two often unite, as when a direction to do, or to refrain from doing, both regulates personal experience and adds to it a reason based on the knowledge of others of some relation that has not yet come into that experience.

Such communicated knowledge, however, deals with the child's immediate environment, and, consequently rather deepens the knowledge given by personal experience than extends its scope. Yet the direct surroundings of every one are so limited, while the assumptions of knowledge in ordinary civilized life are so extended, that the young can only be fitted to take their part in such a life if the range of their knowledge be extended. To live effectively we must profit by the experiences of our forefathers and by the wisdom of our contemporaries. Life is not merely here and now. For each one of us is a fuller life of the spirit, and unless to some extent we enter into that we cannot share the best the world can offer us, nor can we realize our own possibilities.

This wider experience, however, must be made our own, or it profits nothing. Merely to learn statements of what has been done or thought in the world, and never so to take them into our own thought and feelings

and aspirations that they help us to judge more justly and more correctly in the situations of actual life is worthless. The accumulation of a mass of such dead bones of information may be erudition but, though it is commonly called 'knowledge', it is not knowledge in the true sense of a living factor in the guidance of life. Its outcome is pedantry, not wisdom. Communicated experience and knowledge must be made our own experience as fully as it is possible so to assimilate it. It becomes ours only when in imagination and thought we ourselves live through the experience, or reconstruct the edifice of knowledge. It shows its value, just as does direct experience, in an increased power to deal with actual situations of life of whatever character they may be, not in the ability to repeat in words an account of it. We learn—or we should learn—in order to increase our wisdom in the conduct of our lives and in the taking of our proper share in the social life around us, not that we may lay out in order the skeletons of the past. "Can these dead bones live?" must be answerable in the affirmative if the "dead bones" are to justify their inclusion in what is taught to the young. "Best of all is he," said Hesiod, "who is wise by his own wit; next best is he who is wise by the wit of others; but whoso is neither able to see, nor willing to hear, he is a good-for-nothing fellow."

"Studies serve for delight, for ornament, and for ability". So does Bacon begin his well-known essay. For the purposes of education we may omit the second heading. The time of youth is too short and too valuable to be spent in acquiring that which adds to neither the joy nor the usefulness of life. But each of the two other considerations should be remembered, or the

education will deform and narrow the expanding life. Together they demand the inclusion of as much as time permits to be attempted; they leave no leisure for learning the worthless.

This has always been one of the chief stumbling-blocks of schools. We have already seen that in giving opportunity for guided personal experience schools have often not done all that it is reasonable to demand of them. Too often, indeed, they have done nothing, but have confined themselves to communicating statements of the knowledge of others. The selection has been determined by custom and tradition, and supported by arguments directed to a pre-determined end and not to an investigation of what that end should be. Historically the concentration of schools upon the teaching of Latin was due to the simple fact that Latin was the common language of cultivated Europe, so that in teaching it the schools trained a capacity which was of immediate and first-rate importance in the lives of all who to any degree would engage in scholarly pursuits or retain scholarly interests. Under those conditions the teaching of Latin was abundantly justified, and its obvious bearing on life seems to have secured that a large number of school-boys really attained a fair mastery of the language. But the classical curriculum was maintained long after Latin as the language of culture had been supplanted by the various modern languages. At first this was merely the inertia of school tradition, but when it was challenged arguments in its favour were sought from the faculty hypothesis of psychology, and it was urged that the classical languages were unrivalled instruments for training the intellectual powers. Yet it could not be denied that this hypothetical value was invisible

to the vast majority of boys, and that, with the exception of those who had a special aptitude for such studies, or who saw in them the road to academical distinction—and these two incentives generally coincided—they studied Latin with so little enthusiasm that they certainly did not derive the expected benefits. It was impossible to deny the truth of the picture Huxley drew some forty years ago: “It means... that after a dozen years spent at this kind of work, the sufferer shall be incompetent to interpret a passage in an author he has not already got up; that he shall loathe the sight of a Greek or Latin book; and that he shall never open, or think of, a classical writer again, until, wonderful to relate, he insists upon submitting his sons to the same process.”¹ The knowledge the schools attempted to communicate did not enter into the intellectual life-blood of most of their pupils, among whom there consequently arose the idea not only that the school life outside the class-room was very important but that it was practically the only important part of the school. Indeed, for a great many of them this was absolutely true, simply because the work of the class-room did not enter their real lives at all, for it aroused neither interest nor desire.

It is not merely a matter of subject however. Schools innocent of classics may equally fail to lead their pupils into wisdom through the gate of knowledge. The root of the mischief is always the same. It is that “in this world the gift is valued according to the standard of the receiver—not according to the standard of the giver; men judge us not by effort, but by result. It is not what a thing has cost, but what a thing will fetch, that decides its market-price; it is the scored success, and

¹ Essay on *A Liberal Education and Where to Find it*.

not the secret struggle, that wins the crown.”¹ In harmony with this general method of estimation, we seek the results of teaching in the wrong place and in the wrong way. The school loves examinations, and examinations mainly appeal to memory of verbal statements. If what has been told is reproduced as nearly as possible in the same form, then the actual—if unavowed—scholastic aim is too often attained. The greater the mass of such reproductions the more distinguished the scholar. Still in our own days the complaint of Montaigne is too often justified: “We only toil and labour to stuff the memory and in the mean time leave the conscience and the understanding unfurnished and void.”² Yet it is only so far as learning does enter into the conscience and the understanding that it becomes part of the experience of the scholar, and so is of value to him in life.

Happily an improvement is everywhere visible, but reform has to struggle against the scholastic conscientiousness which rightly desires thorough work and which is unable to cut itself adrift from the traditional tests of thoroughness.

No one can pretend that the test of value for efficiency in life is an easy one to apply in selecting matter for instruction or in determining the method of teaching. On the other hand, no one can doubt that if it be conscientiously applied the result will be a wiser and better one than if subjects or facts are taught as a matter of course, simply because they have hitherto been taught. So, too, if the same test be applied to method of learning, and if it be kept in mind that it is the learning which

¹ Ellen Thorneycroft Fowler : *Kate of Kate Hall*, ch. 18.

² Essay on *Pedantry*.

is of primary importance, and that the teaching is important only so far as it determines the learning, then there is greater hope that the test of success may be placed in the increase of aptitude, not in the amassing of intellectual lumber.

A study of the mental process involved in assimilating knowledge communicated by others should be helpful to the teacher who desires that the learning of his pupils shall be real and fruitful. It will not by itself decide what they shall be set to learn : that involves consideration of their interests in relation to the requirements of their lives. But it will throw light on how they must learn if the learning is to result in true spiritual growth.

In understanding the possibility of one entering into the experiences of another we may, perhaps, find a starting-point in the fact that quite instinctively a child implicitly assumes the existence of familiar people and things when they are removed from direct experience. He may picture his mother as doing this or that though he does not see her : he assumes that his toys will still be found where he left them. These implicit assumptions are made because only by assimilating the existence of others to his own continuous conscious existence can he understand it. Without conscious thought, then, personal experience is from the first a key to the experience of others. So, too, a child learns to read approval or disapproval, joy or sorrow, encouragement or anger, in his mother's face, partly because he himself instinctively shows such emotions by similar modes of expression, but mainly because those signs of her attitude towards him do not stand alone, but are always parts of fuller dealings with him which as a whole make the situation quite clear. The former factor is implicit : the

latter is more or less explicit, but with a tendency to become implicit and immediate. As experience of emotional attitudes grows the child more and more takes for granted the meaning of the earliest signs say of displeasure or disapproval, and he shows his understanding by the regulation of his behaviour.

An excellent example of how accurate and complex such interpretation of the outward actions of others may be without the intervention of speech is found in those plays in dumb show—such as *L'enfant prodigue*—which a few years ago were generally popular. By clever acting the whole story was made plain without a single word being spoken, and that not only as a series of events but as an emotional drama. A well-acted charade provides a simpler example of a somewhat similar character.

Such a drama would be unintelligible to a savage from Western Africa, simply because it depicts a life out of relation with his own experience, and emotional values to which he is a stranger. Similarly, a religious dance of savages appeals to those among whom it is one of the highest forms of emotional expression in a very different way from that in which it appeals to a European. Even if speech be added, no matter how frank and straightforward it may be, the difficulty still remains. We cannot enter into the feelings and thoughts of the savage, nor he into ours, simply because our whole lives have been different from his. And because he and we cannot enter into each other's feelings we cannot interpret each other's mimetic art.

Probably the next step in the representation of experience is found in pictorial art. It needs no words to prove that the same picture means very different things to different minds. This implies that different

minds bring to its apprehension very different systems of evaluated knowledge ; for the mere sense impressions are the same for all who can perceive them. It is needful to add this saving clause, for the very seeing is a matter of understanding and insight. A simple example of this is any 'puzzle picture'. When we have found the hidden object it stands out clearly, but we may have looked long before we found it at all. So on a higher plane, there are often parts and details of a picture which take a very new and often a very suggestive significance as the meaning of the composition guides our study. In truth, we come to see what before we did not see. The lines and colours combine into previously unseen relations, giving a wider and deeper value to the whole.

True as this is even of what appeals directly to sight it is yet more true of all that the seen means to us emotionally and spiritually. According to the wealth and depth of our experience are we able to use the picture as a bridge of communication between our own soul and that of the artist. Show a child of six such a picture as Millet's 'Angelus' and he will see in it a man and a woman, a wheelbarrow, a basket and a fork. Probably he will enumerate all these : perhaps only the man, the woman, and the wheel-barrow. That is all the picture means to him. A child of twelve will give a fuller description of the visible features represented. He will see the field, will note the dress, attitudes, and relative positions of the figures ; he may remark that it is sunset. He may possibly notice the colour-tone of the whole. Further than this the ordinary child will not go : further than this many an adult cannot advance. But to the seeing eye the picture means much more than this ; indeed, it does not *mean* this at all. It means simple-

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hearted devotion sweetening arduous and humble toil ; it means all the glorious spiritual richness of Christianity.

If we consider examples of less obvious art, such as Watts' 'Love and Death', or still more, his 'Hope', we see even more clearly how much the meaning they have for us depends on the spiritual experience, the living insight, we bring to the contemplation of them. It may be that the language of the artist is unfamiliar to us ; then we misinterpret. Many people, for instance, can find nothing but bad drawing and worse anatomy in mediaeval pictures or painted windows, not understanding that the figures were not intended to be copies of nature but symbols of spiritual qualities. Once that key is really seized the richness of spiritual experience suggested becomes more and more evident.

The greatness of a picture consists above all in its wealth of spiritual suggestion. But only when the meaning conveyed is the direct expression of the spiritual life of the artist does it appeal to the soul of another. When it is merely the setting forth of a conventional idea, or the representation of a borrowed thought, it leaves us cold and untouched, no matter how great a technical skill it may display. It cannot connect soul with soul because it did not originate in soul. When the thought burns for expression it finds it in the most direct and simple means. If one compares, for example, the 'Death of St Francis' of Giotto with the treatment of the same subject by Domenico Ghirlandaio one sees how simply and directly, yet how powerfully, Giotto brings home to one the emotional value of the scene—the sorrow, not devoid of hope, of the disciples, the calm trust of the dying saint. The later painter, obviously taking his inspiration at second-hand from the

earlier—for the general composition of the picture is the same—has no such clear and direct spiritual meaning to convey. One feels that he paints his fresco for adornment, and so he overloads it with ornamental accessories so incompatible with the scene that they not only distract the attention but positively hinder, if they do not render impossible, any such emotional effect as Giotto so surely attains.

A picture may, of course, give simple sensuous enjoyment by its beauty of line and colour, but if it mean no more than this to us it is on the level of a sweet smell or an exquisite wine. Great art does mean more to the artist: it expresses his soul. So it means more to him who has the seeing eye and the understanding heart. This is not to say that art is necessarily didactic. That implies the suggestion of a message more or less foreign to itself. It degrades art from being the direct expression and interpretation of life to being a mere channel for another's dogmas.

When we consider how little there is in a picture looked at merely as a coloured surface, and how much of spiritual meaning it may have for him who can read it, the great and fundamental principle of all learning from others is made abundantly manifest—that such learning is proportioned to our power to find an interpretative meaning within ourselves, a meaning which will ever after be richer for this experience.

It is evident that children and boys and girls cannot enter far into the meaning of art. As contemplative poetry bores and repels them so they turn away from all but obvious pictures. Yet unless they begin with simple works of art which are easily grasped and interpreted they can never develop that insight and power of

interpretation which will open to them the more hidden recesses. Certainly, the mere study of pictures will not do this, but only life in all its fullness. As no one can become a great artist who has lived a starved life, so no one can feel the depth of meaning of great art whose outlook and experience have been narrow or sordid.

It is of no use to tell another what to admire. Yet children may be tactfully led to feel art by a teacher who has the real spirit within him. Always largely true, here it seems to me to be wholly true, that "one's power of teaching increases not by teaching but by learning."¹ All will not feel art equally: many, perhaps, but slightly. Yet to awaken even a glimmer of inner light is worth doing: without it one great realm of spiritual life is for ever unexplored.

Art, however, because of its very intimateness is strikingly personal in its appeal. It adds to the joy and beauty of life; it extends the sympathies by making us capable of truer and fuller feeling; it ennobles and vivifies the springs of conduct. In a way it makes us understand more truly both our fellows and the world of nature, because understanding is always as much of the heart as of the head. But it does not directly give knowledge in the ordinary intellectual sense of that word. That is the function of language, which is, before all else, a means of communication. On that the school must always largely rely, though it will not educate well unless it avoid that exaggeration of the function of language of which mention was made in the last chapter.

Into the earliest development of language in childhood I do not propose to enter. It has been traced with great care in several monographs on the psychology of infancy,

¹ E. F. Benson: *The Challoners*, ch. 5.

and it is not necessary to recapitulate the results. Details are of value to us only as indicating and throwing light upon the general form of the process of learning both to understand and to use speech. Of course, that form is the same throughout life: it is the filling which grows in richness and fullness.

It should first be noted that speech is not only a means of communicating a knowledge of the experiences of one to another, but it is also a direct experience of the latter. When a child hears words he has a perceptual experience; when he tries to utter words he is attempting to do what he hears others do. Psychologically, then, there is nothing exceptional about language. Advance in the understanding of it is only one form in which perceptual knowledge grows. That form has been seen to be a gradual accumulation of meaning which leads us not only to recognize but to understand the perceived object. We saw also that this meaning does not appear in consciousness separate from the thing recognized, but is a latent expectation of what, by appropriate acts, we could bring into direct perception. Further, it was pointed out that perceptual activity deals not with single things in isolation, but with chains of acts dealing with many things successively. The separation of things and the recognition of each as having an existence of its own is an act of perceptual analysis. Lastly, we saw that when these perceptual objects are examined in themselves and in the relations to other things which make them what they are, our thought becomes conceptual; but that this is only making explicit the meaning which was hitherto implicit, and without which no recognition or naming of objects would have been possible.

Every word of this applies to the learning of speech. Little by little the child separates out words from continuous speech. The same sound, with the same general reference, occurs again and again, and so gradually gets an independent existence of its own—that is, a meaning of its own, though that meaning is not thought by itself but only enters with other similar elements to form the general meaning which the whole speech has for him. He thus learns to recognize before he can produce, just as in all other modes of knowing and doing. For the former involves only one form of growing skill; the latter adds to that a further and more difficult form, in that to recognize is always easier than to produce. We see the same throughout life and in every department of activity: our ideas are in advance of our doings, or our doings themselves are poor stuff. “Do as I say, not as I do” is usually excellent advice, for we can all see, at any rate in imagination, something better than our own performances. In language in particular we know that the vocabulary we use in speech or writing is always less extensive than the vocabulary we can understand. Perhaps this is brought home to us most clearly when we apply the test to a foreign language. We find that we can read it much better than we can speak it.

At first the name is no more separated from the thing in the child's mind than are such qualities as taste, colour, or texture. So the first words a child speaks are names of things, then follow verbs or names of actions. Often, indeed, his single-word utterances express more than mere recognition. With the child, as with the adult, words are but a part of vocal expression, and ought not to be separated from the tone of voice and general

manner of utterance, or from the actual circumstances which call them forth. A single word may express a variety of mental attitudes towards the thing named. This is also true of interpretation of the speech of others. The mother's tone of voice expresses approval or disapproval, encouragement or prohibition, as surely as do her words; yea, more surely, for a very young child knows when his mother is pretending to be fierce towards him in play, no matter what may be her words. The beautifully natural modulations of the speech of a young boy or girl show what a large part mode of utterance plays in the expression through speech of thought, of emotion, of wish.

Words are, however, general in their reference, and as experience of things widens this generality comes more and more to the front. With the use of such qualifying words as adjectives and adverbs we have evidence of the beginnings of conceptual thought, for they indicate that a quality can be given a meaning apart from that of which it is a quality. The more difficult words expressive of relation are naturally the last a child acquires, because relations of thing to thing are not directly given to sense observation, but are interpretations of what is so given. The child, for example, sees a ball lying under a chair. The use of a preposition implies that this spatial relation has itself been made the object of attention.

More and more as speech is acquired the reference is freed from the immediate surroundings of the child. He can ask for what he desires, though he sees it not. Here is a distinct step in advance of asking for it when he sees it, for it involves a recall in memory of the desired object, a recall which both centres round, and finds expres-

sion in, its name. But he can also understand statements about things which are not present to him. What goes on in his mind when this happens? We will say that a child is told that his dog has been out for a walk. He hears the words one by one, yet the meaning is not a combination of as many separate meanings as there are words. The first words raise in his mind his idea of the dog with an expectation more or less vague which the other words fill out and make definite. At each step the initial idea grows in explicitness of meaning. The child has no need to wait till he has separately got ideas of dog, going out, and walk, and then to fasten them together. It is the dog-idea taking a specific form under the guidance of the communication. Now, evidently this is possible only so long as the descriptive words have meaning for the child. If he were told that the dog is a quadruped of the genus *canis*, the expectation raised by 'dog' would be balked; the words would convey nothing to him except that something was said about his friend the dog.

We have, then, two points: that the meanings of words in speech do not arise separately in the hearer's mind, and that only words which have gained meaning from past experience can evoke response.

The latter of these two points is easily granted; the former is obscured by the fact that we are so used to the separation of words on the printed page that we think of them as separate constituents of speech. Yet historically speech ante-dated words, and even in writing separation into words was at first unknown. There was no such separation, for instance, in early Greek manuscripts. Further, earlier languages expressed by what were written as single words many ideas which a modern

language uses several words to express. All the inflexions of Greek and Latin are cases in point.

So it is not true that the word is the unit of speech. Speech means the expression of thought, and that as a rule requires several words even when the thought is a simple one. We saw that in analysing an object of perception the object is yet held in the mind as a whole : whatever quality or relation is attended to, there is implicit in the thought the unity of the object. Moreover, though no analysis exhausts it, yet we do not lose any of the object, no matter how inadequate our analysis may be.

Exactly the converse is true of constructing a meaning. The enumeration of elements is never complete, and yet the idea raised is of a complete object, because the words used do not stand simply each for one naked element, but each is a suggestion of the meaning of a whole, to which every added qualification gives precision. If, for example, I hear or read the words 'The king raised in his hand a heavy golden cup richly set with jewels', the meaning starts with 'king' and an expectation which is given definiteness by the word 'raised', a definiteness increasing with each added word. My idea grows in clearness little by little : it is not built up at the end. Indeed, it is evident that 'heavy', 'golden', 'richly set with jewels' cannot be thought apart from something of which they are the qualities.

This is the process in all interpretation of speech—the giving increasing precision to an indefinite whole. All that has been said gives meaning to what is being said, and at the end we have a systematic whole of meaning, not a series of meanings like beads on a string. The proof that we have assimilated the earlier steps is

our increased power of assimilating the latter. Then, indeed, we have made the communicated knowledge part of our own thought-experience, for we use it to interpret other presented ideas.

Several suggestions as to teaching here offer themselves. The first is that the presentation of the matter the pupils are to learn should be systematic in arrangement, and given at such a rate as to keep intellectual effort on the stretch, and yet allow time for each new element to be received into the growing whole of meaning. Another is that to require pupils to repeat in a series the various ideas or facts which have been told them is to take to pieces again the mental construction which the whole teaching should aim at securing. Worse still, evidently, is the common plan of the teacher taking it to pieces himself and asking various pupils to pick up a stone here and a balk there, with the result that all which remains is a heap of mental *débris*. The true test of successful teaching is the increased power to deal with similar matter, and that should be tested by the amount of intelligent anticipation during the exposition itself and by giving similar matter to be dealt with. Learning should develop intelligence, and to this remembering is auxiliary. But remembering here, as in the case of personal experience, by no means necessarily implies recall of individual items.

We must now face the fundamental question of communication—how is it possible to give new knowledge though we are understood only when our speech raises in our hearers' minds meaning derived from their own experience? The answer is to be found in a consideration of that very generality of words which has been signalled as the chief characteristic of the acquire-

ment of speech. A child may never have seen a king or a golden jewelled cup. Yet he has heard of kings, and has doubtless seen pictures of them. Probably while he is young he imagines them as always wearing a crown and clothed in gorgeous, if inconvenient, robes. As he grows older that meaning will be rectified. For our present purpose it does not matter whether the king is so thought or no, except that with a young child anything which makes the idea vivid is to be welcomed. So, too, the child has had experience of raising things in general and cups in particular: he knows gold, and he has probably seen jewels. If he has not, that part of the meaning will remain dim to him till he does see some gems. Every element, then, is familiar to him, and as he has learnt that 'golden' may be a quality of many things he is ready to imagine a golden cup, even though he has never seen one. From familiar elements a new compound has been formed. Here again it should be noted that we have no new form of mental process. It is only a special case of the general rule that new knowledge grows out of old acquisitions.

The most elaborate new mental constructions we can make are subject to exactly the same conditions. Unless the elements are known the combination cannot be made. Of course, this also is a progressive achievement. Every new combination is a possible element in a further compound. Just as in the acquisition of some form of bodily skill the mastery of one simple combination of movements makes possible the acquisition of a more complex combination, so it is with that increasing skill in knowing which we call intelligence. Intelligence is the functioning of past acquirement in the presence of a new situation, that past acquirement being, of course,

the present form of an individual human capacity and not a piece of lifeless mechanism.

We all know from our experience both as teachers and as learners that the great drawback to knowledge received at second-hand is that it is too often wanting in vividness and clearness. There are many reasons for this, of which the two most important are want of interest in the subject and poverty in the meanings attached to the speech. The want of interest may be in the teacher ; then assuredly it will be reflected in the class. We are too apt to forget that teaching is the contact of mind with mind, and that all such contact which is alive and enlivening is emotional as well as intellectual. A mere cold and bloodless presentation of almost any matter will make it dry and repellent to children. Even adults have been known to condemn sermon or lecture as tedious, although its matter if differently presented might have roused them almost, if not quite, to enthusiasm. With young boys and girls, lack of enthusiasm on the part of the teacher is the most frequent cause of intellectual inertness on the side of the scholars. ' Older boys and girls, no doubt, require, in addition to stimulating teaching, to see some value in what they are asked to learn before they will throw themselves into it with energy.

Closely connected with want of interest is poverty of meaning. This also is often due to a faulty presentation, especially in oral teaching. Words are abstract, and in teaching we want them to suggest concretes. Evidently if the teacher's exposition be couched in general terms the concretes called up will be sketchy and thin in meaning. If a scene or an event is being described the more particular the words used the more definite the meanings they evoke. ' The king raised a cup', for instance,

cannot mean as much as 'The king raised a heavy golden cup richly set with jewels'. It is detail which makes a mental construction clear and precise. And to give appropriate and effective detail presupposes very considerable knowledge of the subject on the part of the teacher. But this does not mean verbosity. It is quite easy to bury the whole under a mass of detail, like the fresco of Ghirlandaio to which reference has already been made. How simple yet how adequate is Tennyson's description—

"a chapel nigh the field,
A broken chancel with a broken cross,
That stood on a dark strait of barren land:
On one side lay the Ocean, and on one
Lay a great water, and the moon was full."¹

Yet the clearest and most precise exposition will fail if the experiences of the children, including all they have really learnt and thought through the instruction of others, do not supply full and accurate meanings. This shows that neglect of the guidance of direct active experience by schools is a misfortune not only on account of its limitation of the children's lives but even in relation to that very intellectual culture for the sake of which it is put out of court. To name a cornfield to a child who has never been in the country, or a storm at sea to one who has never seen the sea, is to utter words which raise in the minds of the hearers but vague ghosts of meanings. Even with the most vivid verbal descriptions assisted by good pictures the significance of the words must fall far short of a remembrance of the actual experience. Perhaps the greatest difficulty in teaching young children is that teacher and taught almost speak

¹ *The Passing of Arthur.*

different languages, for though they use the same words the meanings implied are far from being the same. One can never give good oral teaching till one has mastered with approximate accuracy the real speech of one's pupils, so that one knows what kinds of meanings one's words will call up in their minds. Then only can one set oneself deliberately to develop those meanings by inducing in the children either direct experiences or a living in imagination through the experiences needed.

To live in imagination often carries with it the seeing in a series of mental pictures of the things or events described. In this case greater vividness is secured than when such visual pictures are absent or are obscure and blurred. It is probable that the young have usually some power of visualizing, though it is by no means as general as is sometimes assumed that the pictures are sufficiently clear and definite to be of much value. Of course, those who visualize their memories of their own past experiences will also visualize the scenes they construct mentally under the guidance of descriptions, whether heard or read. In such visualizing there is the same general process that has been already discussed under meaning. The picture, like the meaning, begins by being vague, and gradually gains in definiteness and clearness as the description proceeds. It is like a landscape coming into view as the sun dissolves the morning mist. There are not imaged in succession a number of qualities which are afterwards fitted together like the pieces of a Chinese puzzle. Whatever results in our minds from hearing a description, then, is from the first a form of apprehending the whole, which is filled out, and it may be modified, as the guiding speech goes on.

Pictures add vividness to meaning, but they are not

themselves meaning. They play in communicated experience a part analogous to that which direct presentation to sight plays in personal experience. To be familiar by sight with an object does not guarantee that we know much about it, and even when it enters into some perceptual activity it does so in its meaning for that activity. In climbing, for instance, the sight of a ledge or a projecting stone suggests to us that it will, or will not, support our weight, and on that meaning we act. The seen qualities are not attended to in themselves, but simply as indicating firmness or looseness. On the other hand, when we come to conceptual analysis the seen object is regarded primarily as a bundle of examples of general qualities and laws; that is, each seen quality is a cue to a line of thought and a suggestion of a general and far-reaching meaning.

Everybody seems ready to grant that objects of perception are not our thoughts of them. Yet many confuse visual images, which are only copies of objects as seen, with thoughts or meanings. In truth, like their originals, such images are merely pegs round which meanings cluster, and cues which prompt us to think those meanings. Some people, it appears, cannot get the meanings clear without the images. George Meredith depicts a common type of mind, especially among women, when he says of Cecilia Halkett: "A political exposition devoid of imagery was given to her next day...when it was only by mentally translating it into imagery that she could advance a step beside her intellectual guide."¹ But it is obvious that unless the abstract words had suggested a meaning the translation into imagery could not have been made. The imagery

¹ *Beauchamp's Career*, ch. 28.

did not make the meaning, but was born from it and vivified it. So long as it only does this, well and good. But vivid imagery may so concentrate the meaning in itself that that meaning is distorted. For all images are particular, while the meaning is often general. If the whole discourse is meant to give knowledge of a particular thing, then any important distortion due to imagery arises from faulty or inadequate description. But if the whole thought to be conveyed is a general one then if it be limited by the force of the image the distortion may be extremely serious. Here we see the danger attending the use of concrete illustrations to make clear general truths—the danger that the similitude may be mentally extended beyond its proper range, which is usually a narrow and special one.

Still more insidious is the danger of allowing trains of imagery to be substitutes for thought. To look is much easier than to think. But we may look at many things without deriving the slightest benefit, as witness the mode in which a large number of people pass through a picture gallery or a museum. Only when we look for a purpose, and when what we see prompts thought and effort to find meaning, do we profit intellectually. The mere amusement of looking is quite other than the true interest of thinking. This distinction is often overlooked in lessons based on observation; it is equally often neglected in lessons of narrative and description. Children absorbed in a series of mental pictures may enjoy such a lesson without putting forth any energy of thought. There is emotional interest, but little or no intellectual interest. Such teaching is no more a training of the mind than basking in the sun is a training of the body. Each is recreation, not work. In order that

teaching which communicates knowledge should be educative it must evoke thinking and not simply encourage gazing at a mental panorama. How far it does so is tested by the amount of intellectual apprehension and anticipation shown by the pupils. The teacher should have his finger on the pulse of meaning, and not be satisfied with the rapt attitude which may indicate mere sensuous enjoyment.

It may be noted that description leads only to visual imagery. "I should not acquire any real knowledge of the Scotch air 'There's nae luck' by being told it was like 'Auld lang syne,' or 'Robin Gray,' and if I said that Mozart's melodies were as a summer's sky or as the breath of Zephyr, I should be better understood by those who knew Mozart than by those who did not."¹

Nor can speech directly communicate emotion. It can only raise in the hearer's mind ideas favourable to the appearance of the emotion, but the latter can only be directly communicated from one mind to another by contagion. If a teacher desire his pupils to feel that a deed he is describing is hateful and despicable, it is useless for him to present that view merely as an intellectual judgement which awakens no corresponding feelings in his own breast. As well might he hope to inspire admiration of a work of art by casually remarking that it is beautiful, and then immediately turning away.

The use of pictures to illustrate descriptive and narrative teaching is evidently of most value to the pupils who visualize badly. But when historical accuracy in the way in which places and things are thought is important they may be regarded as necessary to all. When, on the other hand, the scene is imaginary they

¹ J. H. Newman : *The Grammar of Assent*, p. 26.

should be used so as not to limit the pupils' freedom of interpretation. This is probably best secured by exhibiting them after the description has been given. Even then, though they help the unimaginative they not infrequently decrease the interest of the imaginative. Great tact and insight into the particular pupils concerned are needed to use illustrative pictures with a really educative effect.

The whole of the preceding discussion of the communication of knowledge by speech applies to its communication through books, which are only speech made visible. Words read act just as do words heard. Indeed, with many people they *are* faintly heard in imagination ; and with all, probably, reading is attended by some incipient utterance. The meaning is apprehended with growing clearness. Each new chapter is taken up into the growing whole of meaning, and so the understanding becomes fuller and richer as we go on. Often, indeed, our grasp of the whole meaning is made evident to us by our correct anticipation of parts we have not yet read. One can frequently see what the end of a novel will be long before reaching the last page. This intelligent anticipation is due not only to the part already read, but also to experience of the ordinary course of events in novels. The more novels one reads the less novelty one finds in them. This varied experience gives us not a definite knowledge of the exact course of the particular novel in hand, but an expectation which, though undetermined, is fairly definite in general form.

When we wish to read and to master more difficult matter we shall do well to take a hint from this experience of novel reading. If we read through the treatment of the whole subject first, with attention indeed, but

without stopping to master the details, we provide ourselves with a general idea of the whole meaning which will help us to assimilate the matter on a second and more detailed study, in a similar way to that in which the novel reader is aided by his past readings of novels. The second reading should master the details, and their relation to each other and to the whole. To master them severally and fail to grasp the part each plays in the whole is a most worthless form of cram. Unhappily, it is too much cultivated by the scholastic habit of questioning much on separate details and little or not at all on relations and wholes. Yet only as a whole can the matter be thought, and if it be not thought the labour has produced nothing but a memory of empty phrases, which will soon be partly forgotten and partly confused. A third reading is most valuable if during it the attention be engaged with these relations; most valueless if it only attempt to fix more firmly the memory of disconnected details. The wrong way of reading is as common now as it was two centuries ago when Locke wrote: "The mistake here is, that it is usually supposed that, by reading, the author's knowledge is transfused into the reader's understanding; and so it is, but not by bare reading, but by reading and understanding what he writ."¹ Or, as he says in another place, "Reading furnishes the mind only with materials of knowledge; it is thinking makes what we read ours."²

In reading we have to struggle, and to teach our pupils to struggle, against ineffective work. Every mind has a good deal of mental sloth, and we all know how easy it is to run over page after page without bothering ourselves much about what it all means. Much reading of

¹ *Conduct of the Human Understanding*, sect. 24. ² *Ibid.*, sect. 20.

light literature cultivates this habit of mental surface-scratching. Its best result is a certain amount of superficial inaccurate information ; its worst a state of mental stupor. Just as an oral lesson which to the pupils is only a succession of visual pictures is of no educative worth, so such reading, in which there is perception of the words attended only by faint adumbrations of meaning, and it may be by some visual imagery, is little but a waste of time. As students we can cure ourselves by watchfulness and self-examination on what we have read. As teachers we can at any rate help to cure our pupils by applying similar remedies to them.

The earnest student, however, has to struggle rather against a wrong direction of energy than against a failure to put it forth. He feels that there is much to do and that the time is short. So he believes he has not time to stop to think : he must simply try to remember. One of the most valid and most serious charges against the custom of regarding preparation for examinations as the chief work of school and university is just this sense of want of time, and the consequent intellectually breathless study. Certainly it is true that in the long run the method of learning by thinking is the more rapid. But it is apparently slower at first, and the earnest student is afraid to trust to the long run lest it should be too long for him. He has to keep up with his class now at the beginning, and the teacher of the class has too often not arranged the work so that progress, though beginning slow, is gradually but surely accelerated.

Whatever the reason, the prevalence of such a mode of learning in any place and at any time is absolutely incompatible with true intellectual education. For such knowledge only makes the pedant, who can, perhaps,

talk about many things, but whose mind has not been trained to deal with the real concerns of life, whose so-called knowledge is mere lumber which has not increased his efficiency because it has not been taken up into original capacity and, by feeding it, developed aptitude. "The judgement is little better, and the stock of knowledge not increased, by being able to repeat what others have said or produce the arguments we have found in them."¹

Whether, then, knowledge be presented by reading or by hearing, it is assimilated only when it is actively thought, and not passively received by the senses and the understanding. Such active thought shows itself in intelligent anticipation. Doubtless, the relative parts played by thinking under direction of what is said and by intelligent inference as to what will be said will vary in different subjects as well as in different minds. When the record is of facts, as in history or in the description of a people, the latter will be relatively small. Still the former is also an active process, just as is a physical activity guided by imitation. Thought is directed in its activity, but it must be active nevertheless, or there is no entering into the spirit of the new matter, no making it part of one's own life experience. That this activity may never cease, the teacher, especially of young children, will do well to encourage every possible outward expression of it. When children are simply asked to listen there is always the danger that visual imagery may supplant thought instead of being auxiliary to it.

When, however, the communicated knowledge is less of fact than of relations, the activity required is the grasping of a demonstration. Here the aim should be

¹ Locke : *Ibid.*, sect. 20.

to make originative suggestion play as large a part as possible. Direct guidance of thought should be subordinate to intelligent anticipation, whereas in the former case the opposite relation holds good.

In speaking of reading I have, of course, meant the gaining of the thought of another through the printed or written page. In this process the whole function of the printed words is to suggest meaning. That is to say, the explicit direction of attention is conceptual, while the perceptive process of recognizing the printed symbols is implicit. We are at once aware of this if an unknown word suddenly wrenches attention from meaning to visible form. The fact that the meaning raised in our minds may be of a concrete thing or event, and that we try to think it in a way which approaches perception as nearly as possible, is not at all inconsistent with the statement that attention to meaning is conceptual. For the percepts in reading are of letters and words, and when the meaning suggested is concrete it is because the reading calls up the thought of a concrete fact or event, not because it makes us think of the letters or words.

Reading to oneself for meaning has all the characteristics of a process in which the percepts are only cues to meaning. The practised reader when he is running over matter very easy to him by no means says all the words to himself, or, indeed, sees all the words as separate things. He reads in phrases or in sentences or even in longer divisions. A few salient words stand out, as we saw salient letters do in the recognition of a familiar word, and they are sufficient as indications of the general meaning of the passage. If the meaning be at all obscure more detailed examination is necessary ;

each word may be read, the relation of clause to clause may be definitely attended to, reference may even be made to an earlier passage, until the whole meaning stands clear. But the perception is still purely instrumental, and its extent is still determined by the facility and completeness of the appreciation of the meaning.

Very different from this process is that of reading aloud. Here there are two perceptual processes. The one is that of recognition of printed symbols: the other is the utterance of sounds corresponding to those symbols. It is this latter process that sets the purpose, and to it effort must be given. True, apprehension of meaning must be present if the reading is to be really intelligent, for, as has been already pointed out, not the words only but the way they are uttered compose expressive speech. Yet a general grasp of meaning is often sufficient to enable a practised oral reader to phrase, to modulate his voice, and to mark relative emphasis in a broadly intelligent way; though he will only read exquisitely if the full force of the passage determine his utterance. But this possibility shows that reading aloud is no real test of the power of getting intellectual nutriment from books. I once asked a university student who had just read aloud a passage with considerable expression his opinion of its truth. His reply was instructive: "Let me glance through it first to see what it is about."

Reading aloud is a form of practical skill, and its perfection depends even more on the organs of speech than on the intelligence. A good elocutionist is not of necessity a very intelligent reader, and, on the other hand, a reader who profits much by what he reads may be unable to read it aloud so as to give pleasure to his hearers.

Indeed, when we realize the different ends in view in the two cases we shall see that much practice in reading aloud, especially when not preceded by reading for meaning, is likely to form a habit which will interfere with that full and explicit attention to meaning which is of the very essence of true reading.

It is really unfortunate that because these two forms of activity are classed together under one name they are commonly regarded as identical. It is easy for a teacher to judge how well his pupils read aloud; not nearly so easy to test their skill in understanding what they read. Too often he confuses the one exercise with the other, and regards good elocution as evidence of power of reading, though in the latter meaning is the centre of interest, in the former it is ancillary to utterance. An analysis of the processes involved indicates that there is no such necessary connexion as is commonly assumed, and experience supplies examples of the evil effects of the confusion. Sir W. H. Broadbent has recorded the following case—

“I was informed that a boy of fourteen, of superior intelligence, was kept in a lower class at school because he could not read aloud, and that his prospects in life were likely to be injured by his not reaching the proper standard.

“I found him to be remarkably alert intellectually, fond of reading, particularly adventures and travels, full of information, ready and apt in conversation, and altogether a very interesting boy. He could not explain his difficulty in reading aloud. I gave him two long and rather complicated paragraphs from the *Times* to read, and asked him to tell me what they were about. This he did readily and clearly. I then asked him to

read them aloud. His face at once took on an expression of anxious effort. He did not read even short words fluently, but uttered two or three with the slight hesitancy and uncertainty of a beginner, and was then brought to a standstill for a moment by some longer word, not because it was difficult or unfamiliar, but apparently as if he had to grasp its meaning and pass it through his mind for utterance. Sometimes it seemed as if he were on the point of substituting another word....

"There was clearly no word-blindness in the true sense of the term, since that is a purely sensory defect, and this was a motor failure, not a sensory defect. Words printed or written reached his mind with normal readiness, and were perfectly understood. There was no fault in the mechanism of speech or intellectual expression.... The afferent and efferent paths, and the sensory and motor centres concerned in language as an intellectual process, were intact. It was utterance in one particular respect which was interfered with—the translation of visual characters into the articulate sounds which they represented.

"This boy ultimately gained the faculty of reading aloud fairly well, but with great effort, and when he read aloud the attention was so concentrated on the task that he did not understand what he read."¹

The practical conclusion is obvious. Reading aloud is an agreeable accomplishment, a form of bodily skill in which different individuals are capable of advancing to very different levels of excellence. But reading for meaning is the only key which opens the way into all the treasures of thought, knowledge, and wisdom, gar-

¹ *Remarks on Some Affections of Speech: British Medical Journal*, June 15th, 1907.

nered in books. It, too, has to be learnt, for it also is skill. It must therefore be practised, for only by practice is any form of skill, be it physical or be it intellectual, attained.

The rule that communicated knowledge should make for efficiency, and that this is possible only so far as the information can be taken up into personal experience by thought, makes it clear that it is useless to require the learning of facts which are simply facts. Only so far as facts can be related to each other can they be thought; only so far as that relation can be extended to ourselves can they be used. Whatever increases understanding of the world around has value, whether it throw light on material things or on human societies. Whatever is mere fact may have an incidental use as detail to add vividness to a general meaning, but is not worthy of retention. I remember being told, when a small boy, by one of my teachers that Everest was 29,002 feet high. I asked whether that included the snow, and was told that it did. I then enquired whether melting at one time and a prolonged fall at another would not cause this height to vary. My teacher's reply was more forcible than satisfactory to my thirst for understanding; for the question had been asked in all good faith. Whether it was the emphasis of the answer or the absurdity of the statement I know not, but I have never forgotten it. Nor has it been useless to me, as it has supplied me with a good illustration both of what not to teach and of how not to teach.

This anecdote illustrates the complaint humorously put by Mr Arnold Golsworthy: "The great fault about geography is that the details don't seem to lead anywhere when you've got them. I could not, for instance,

say at this moment, without reference to the encyclopaedia, how many feet Snowdon rises above the sea, but I can still follow the ordinary run of commercial and political life, and my digestion and general health seem in no way affected by the want of these figures....

On the other hand, I know that the river Thames rises in the neighbourhood of the Cotswold hills, but I am not disguising the truth when I unhesitatingly assert that the possession of this knowledge, acquired at great pains in my boyhood, has never been of the slightest use to me. I cannot look to it to heighten my happiness in hours of sunshine, nor can I turn to it for sympathy and consolation in times of depression and liver trouble. It is nothing more than a bald, empty fact, that I could have acquired at any moment by referring to my table atlas, and I have given it house room for years in my mental fit-up, and have looked in vain to see anything grow on it or out of it. It has always seemed a little strange to me that the average school-boy should be inflated with jetsam of this kind, and yet never have so much as hinted to him a few of the peculiarities of the law of his country, or the scope of his future duties as a man and a citizen.”¹

Geography should induce in the pupils an interest in the common natural phenomena around them, and an ability to apply such knowledge to the understanding of natural phenomena similar, and yet different, elsewhere. Above all, it should extend the range of their human sympathies, and this it can only do on condition that it represents vividly the life of other lands. Names should always mean much more than marks on a map:

¹ *Dr. Banderby's Boys*, ch. 3.

those to which it is not necessary to give any further meaning should be rigorously excluded.

Similarly, history should aim at increasing the understanding of life, and to do this it must lay bare the way people lived, felt, and thought in earlier days. To teach the young that happy and useful lives were lived under conditions very different from those of to-day is to do them no small service. That this may be real to them it must be so presented that the conditions of life are within their comprehension. Thus, the presentation will necessarily be different at one age from what it is at another. The essential thing is that it be alive. A host of dates accompanied by bald statements of 'important events' is mere worthless lumber which buries thought under a dust-heap. Whether in history or in geography the pupils must live in imagination in conditions different from their own, and must think out how those conditions would affect life.

The teaching of history raises of necessity the question of the apprehension of time. Personal experience gives us at the best but a small grasp of time-relations. We all know how untrustworthy our personal estimation of time often proves when tested by the clock. Memory of our past is not much more definite. We may remember the sequence of important events pretty accurately, yet there seems no subjective distinction between how an event of thirty years ago appears in memory and how one of twenty-five years ago does so. We fix our past largely by associating events with the dates of the years, sometimes directly, sometimes indirectly. "I remember that in 1887 I did such a thing, because I did it in the same year as I did something else, and that was in the year of Queen Victoria's first jubilee" is the kind of

combination we often find helpful. If we went by vividness, indeed, many an event of childhood would seem more recent than the doings of a year ago.

We may say, then, that our time arrangement of our own past is essentially conceptual. Our grasp of the time-series of history is only an extension of this. We cannot get a vivid and perceptual grasp of those relations: in that sense we certainly cannot realize them. But we can think them conceptually as separated by greater or less intervals and as less or more remote from our own days. True, our generalizing habit leads us to class under single ideas long periods which we happen to have marked by a single name. But such classing was induced by some real similarity, and so long as we bear in mind that this similarity yet showed itself in successive diversities no harm is done.

Evidently, then, a history without dates would be a history not articulated into a whole. Dates must be learned, but every date should be full of meaning; that is, should be the cue to thought and imagination to traverse a well-known country.

Conceptual thought on any kind of matter means examining the forms and relations of the objects of perception. In language, grammar has this function. The learning of it should, therefore, follow the general lines of conceptual investigation. Now, conceptual thought is only prompted in matter which is already familiar in perception, not only as objects which can be recognized but still more as means which can be used; for the perceptual interest is always practical. It is in opposition, then, to natural mental development to teach grammar to children who have not attained a good working mastery over language. In the next place, it is to be

noted that the relations of words are abstract, and will appear devoid both of interest and of real meaning if the apprehension of them is not seen to be of value in interpreting the language of others or in the personal use of language. "Why is this passage obscure although its words are all familiar?" That, with a carefully chosen passage, will give a prompting to a study which will clear up such obscurities and explain their origin. Only if in some such way the desire to examine the relations of words—which express relations of thought—is aroused, will children take up the study in the spirit which alone can make it educationally profitable. This would point to having very few set grammar lessons but to investigating problems of speech-construction whenever they occur. Nor should the grammatical investigations be pushed beyond the point at which they elucidate thought and the expression of thought in language.

It is the failure to keep to such lines as these which has made grammar so much disliked in schools. There hangs round it a tradition of being both worthless and repulsive, which is passed on from generation to generation of pupils, and which induces a prejudice at the very first which is seldom overcome, and which, indeed, the teaching too often is by no means calculated to overcome. If a teacher would succeed he must adopt the line of stimulating a felt need, and he will perhaps be wise to drop the name 'grammar' altogether though he retain the thing.

When a foreign language is learnt it should certainly be learnt as a language, that is, as a means of vocal communication of thought. When this is not done there is, psychologically speaking, no learning of a language at all. Much of the traditional teaching of

Latin taught what had been a language in such a way that it never became a language to the learners. Take a boy trying to puzzle out the meaning of a Latin page before him, on which the majority of the words are unknown. What goes on in his mind? He perceives each word as a word. It would probably be impossible to find in human life a nearer approach to pure perception, for these words which he can pronounce with more or less accuracy raise in his mind no ideas. One by one he seeks equivalent words in a Latin-English dictionary. Often he writes them down without any apparent idea that their combination is meant to convey a meaning. I remember once asking a class of boys in a school I was examining whether they supposed that boys had ever used such words in their play, their quarrels, or their lessons. They evidently thought me either insane to imagine such a thing or a grim humorist who was trying to see how foolish they could be. Anyway they were not to be caught, and greeted the suggestion with derision. Of course, in the same school the following year I received a different answer; but that was because I had converted not the boys but the teacher. Probably this was an extreme case; the boys were young and had never heard of Roman history. But it illustrates my point that it is possible to teach what is technically a language in such a way that it is not accepted as a language by the learners.

If the guiding principle of teaching a language as a language be borne in mind the method will be one that will carry that language into the pupils' actual lives. It will, therefore, take advantage of all they know in their mother-tongue so far as it helps the mastery of the new language. If they have studied English grammar it is

absurd to refuse to refer to grammatical relations ; if they read English well so much the earlier can they with profit begin to read French or German or Latin.

Further, the teaching will recognize that in internal speech the constant and most important element is incipient utterance of words, and that the memory of language is essentially the acquisition of a motor habit. Whether this be accompanied by a mental hearing of the words, a mental image of them as written, or a visual picture of something which exemplifies their meaning, is accidental, in the sense that none of these things either takes place in all minds or is necessary in any. Speech, in short, should be taught as essentially spoken, not as more or less artificially connected with a mental picture gallery.

Nothing is worth learning which is not in some sense worthy to be a permanent possession. In considering this in connexion with personal experiences we saw that the most important mode of retention is absorption in a growing intellectual or physical aptitude. The experience does not retain an individuality for memory, but we are richer than we should have been without it ; able to act or to think more successfully. It is exactly the same with those communicated experiences which we are now considering. They enrich our lives if they are really made part of our lives by imagination and thought, warmed with that emotion without which they must remain really outside us. Again, just as the individual personal experiences which can be separately recalled are those which for some reason had an exceptional emotional value for us, so we best remember what we were most interested in learning. If that interest be very strong, one hearing or reading may be sufficient

to enable us to recall an idea or a narrative. A child really interested in an account of some heroic deed will remember that deed probably for life, certainly for years.

Of course, items of knowledge which are thus retained are not isolated. They are parts of organs of knowledge in which many other less striking items have been more or less completely absorbed. They are characteristic features of such organs, and they have their value for us in proportion as the systems of thought and feeling of which they form parts are strong and active. In these organs they are united with personal experiences to form determining factors in our present and future lives.

Too often, however, learning at school has meant the getting by rote of that which has in no way been taken up into the life. Here, as we know well, much repetition is necessary, and even then the possession is neither sure nor permanent. The explanation is very simple. Learning by rote is little or nothing more than the formation of a mechanical habit of utterance or of visualizing or of both combined, when the matter learnt is read off from the mental picture. Like all such habits much practice is needed to perfect it. Think how many times one must throw a ball before one can send it unerringly through a ring but little larger than itself, suspended a couple of yards in front of one. This practice we should not undertake unless for some reason we desired to attain the skill. In much school learning such an incentive is wanting. Many a boy, for instance, does not desire to know the intricacies of Latin grammar, and he is only induced to give the requisite practice in repeating declensions and conjugations by quite extraneous appeals. So, too, it is with lists of kings and queens and dates, with statistics of population, heights of moun-

tains, lengths of rivers, and all such scholastic rubbish. These things are incapable of provoking interest because by themselves they are devoid of meaning, and the child has not within him the intellectual setting which alone can give them life. Such learning is, then, a mechanical process. It forms a habit which gradually dies away as soon as the activity ceases to be practised. The decay is obvious from the first, for every error is apparent more clearly than it is in a similarly acquired activity of movement only visible to sight. In a letter to *The Times*¹ objecting to compulsory Greek at Oxford, Mr A. C. Benson incidentally gives a striking instance of how far such mechanical acquirement may be, and actually has been, carried: "The other night a parent was telling me what his boy did to pass the Cambridge Little-go. He was a boy with a gift for mechanical science and a strong visualizing faculty. He learnt a crib by heart, and he learnt the Greek interlined with the crib, not as language at all, but as a series of meaningless pictures or friezes. His careful tutor first eliminated from his crib all pieces set in the two previous years, and thus nearly upset the affair, because a piece was set of which the first two lines were the last two lines of a piece that had recently been set; so that when the boy looked at the piece to his horror he could not recognize the frieze! However, after a moment he saw the well-known forms a line or two further down, and at once rolled off his lesson."

From the standpoint of efficiency such learning is absolutely worthless. "To know by rote is not to know" truly said Montaigne. Nor do observation and experiment give any sure ground for believing that

¹ Nov. 26th, 1910.

such exercise strengthens even the power of learning by rote. Certainly I myself was compelled to learn many hundreds of dates in English history when I was a boy. Equally certainly my power of recalling dates is abnormally small, and to the best of my remembrance it has been so always; assuredly ever since I reached manhood.

In rejecting such mechanical learning, however, I by no means declare against all learning by heart. Two conditions may be laid down—that what is so learnt is needed and that it is understood. Under the former head come all such things as the multiplication table, spelling, and, generally, the merely executive elements in our knowledge. Unless these are perfectly at command thought is continually baffled. They are, indeed, mechanical in their nature and should be made automatic in their operation. But even they should be practised in matter which has value and in ways which by their variety evoke interest in the results they are the means towards attaining.

Under 'need' I would assuredly include beautiful passages which, in Bacon's words, "serve for delight." They are learnt with avidity if they give delight now, and a wise teacher will choose no others. Real poetry and beautiful prose-sayings do not lose either their force or their savour as we grow older. On the contrary we find in them ever more and more as experience gives them ever a wider setting. To them, too, may be applied Emerson's words: "Nature and books belong to the eyes that see them. It depends on the mood of the man, whether he shall see the sunset or the fine poem."¹

¹ *Essay on Experience.*

So we reach the negative rule that nothing should be learnt by heart without justification. This means more than that the teacher should not set such tasks unnecessarily. It implies that he should be on his guard lest his pupils learn by heart instead of thinking and understanding. For, in early life at any rate, perceptual activity is naturally preferred to conceptual. So boys and girls find it easier to learn words by rote than to grasp thoroughly the meaning those words should convey. They will often, then, rest satisfied with that vague apprehension of meaning which attends perceptual reading, and which is all they get even when they read to themselves unless they are taught and trained to think what they read. They will repeat phrases and statements, and even believe they understand them, just because they have not critically examined their own thought, and so do not know how superficial and imperfect it is. If, then, they are told to prepare a chapter in a book they will, if not trained to do otherwise, commit to memory as many of the striking phrases as they can. The attempt at reproduction often shows fantastic blunders.

"But though they wrote it all by rote,
They did not write it right."¹

Really, though in a sense it is natural to man to think, yet it is only through much training that he deliberately sets himself to think when he sees some easier way of getting a simulacrum of knowledge. But of course, without the awakening of thought there is no real interest, just as without interest it is impossible to provoke real thought. Thought is the means by which the

¹ A. C. Hilton : *The Vulture and the Husbandman*.

intellectual purpose given by interest strives to attain its end.

Very little of what is learnt from books needs to be verbally retained. Consequently it is a mistake to encourage reproductions of the expressions of the book or even of the order in which topics are there treated. A reproduction in the pupil's own words, and centred round a given thought, is the most valuable.

Thoughts by their very nature enter into relations with other thoughts, for thinking is essentially a seeking for relations. The more completely this is accomplished in any mind the more fully is that mind able to bring out of its treasury things new and old which are pertinent to the actual situation. It follows that memory improves with life. The common belief that it is strongest in childhood is based on the restriction of 'memory' to the recall of specific items, especially of some definite form of words. It is in the essential sense that memory improves—the sense which sees in it the whole process of the storing of experience, and the slow gathering of wisdom and understanding. The power of memory in life is shown much more in ripeness of judgement than in facility of remembering items either of personal experience or of knowledge derived from others. The latter may be copious and yet the man be far from wise. His acquired information has not entered into the life-blood of his experience, which is his true memory.

Yet there are times when we do require to recall some particular item, and, as we all know, we often are unable to do so. Left to itself our train of ideas flows on in reverie, unguided by any specific purpose and not limited to any one topic. We cannot tell beforehand what line our musings will follow. "The first line of a poem, if

I have previously read the poem, may suggest to me the second line, by its relation of former contiguity ; it may suggest, by resemblance of thought or language, some similar line of another author ; it may suggest, by contrast, some of those ludicrous images which constitute parody ; or it may suggest some image in harmony with its own subject, and some appropriate language with which to invest it, as when it suggested to its author the second line, and all the following lines of his poem.”¹

The extent to which we can determine these suggestions is the extent to which we can command our remembrances. It is an analogous case to solving a new problem. The thoughts in our mind give us many suggestions, and we choose among them one on which we concentrate attention. This in turn raises other suggestions from among which choice is again made. Now, whether we are trying to solve a problem or to remember something, we are able thus to select, because the absence of the solution or of the remembrance is not a bare absence. It is an expectation, so vague that we cannot see the solution, or recall what we wish, and yet sufficiently definite in its general form to negate suggestions which do not satisfy it. We all know the strange elusiveness of the thought which we cannot recall, but which, as we say, “is on the tip of our tongue.”

All we can do, then, when we try to recollect something we wish to recall is to select among our thoughts that which this vague expectation best accepts, and to dwell on it in the hope that, directly or indirectly, it may mediate the recall we desire. When the recall is made we sometimes can, but more often cannot, specify

¹ Brown : *Philosophy of the Human Mind*, lect. 42.

all the successful suggestions. Especially do we fail to do this when the recalled thought comes suddenly into mind long after we have ceased to search for it and have turned our minds to something else. If we could make such an analysis of the process of recall as would lay bare every detail of its working, we should have taken a great step towards putting recollection in our own power ; for to know exactly how suggestion has operated would indicate to us how to set to work to secure such operation in the future. Such a task is hopeless, for the mode of connexion is different in every special case. Our psychology can never cope with the rich complexity of our mental lives.

However, inability to recall a separate item is seldom of serious import. It may, indeed, be a temporary inconvenience, as when one meets a person and cannot recollect his name. But in the essential matters of life it is not recall of particulars but organized and meditated experience which counts.

CHAPTER XI

CRITICAL THOUGHT

EFFICIENCY of life means power to deal with the various situations of life as they arise—to see what each requires and how such requirements may best be met, to distinguish what is essential in it from what may be disregarded. In short, life is a continual solving of problems of all degrees of difficulty in all spheres of human activity, moral, practical, and intellectual. Nor, especially in moral and practical matters, can time always, or even generally, be spared for pondering over various possibilities. We must often act at once, or action will be of no use. Yet, unless that action be guided by knowledge and insight into the circumstances it is more than possible that it will be disastrous. Soundness of judgement, or practical intelligence, must be an immediate perception of the nature of the call made upon us, carrying with it the expectation of how acts of our own will modify the situation. This is a work of skill, for skill is trained capacity to do the right thing in the right way at the right time, whether the doing be bodily or mental. In this aspect of life we find the justification of the old Greek view that living is a fine art.

When we examine skill in living more closely we see that it is at once knowledge and active intelligence. Intelligence faces the present with the guidance derived

from the stored experience of the past. The more nearly that experience corresponds to the present position the more immediately can the nature of the action required be discerned. So a boy finds no difficulty in solving a mathematical problem of the same general kind as many others which he has already solved. So, too, we act almost automatically in the customary affairs of life. It is when there is something new and strange in the occasion which calls for our action that we have to deliberate and weigh possible alternative courses against each other.

Even here it is plain that the suggestion of courses is altogether determined by our experience of possibilities. We seek some analogy in the past to guide us in the present. Not that we stickle for a precedent in the same strict sense as is demanded in constitutional and legal matters, for our decision will not form a general rule for the future guidance of others. Yet it is only in our past experience that we can find anything to throw light on our present needs.

The pondering on what we are to do causes suggestion after suggestion to come before us. It is not a mere matter of memory, for then we recognize at once which suggestions fit the case. Here we have to look forward into circumstances which are not yet real, to see in imagination the result of an action, to harmonize it with principles which we accept as true. In a word, we have to weigh and compare various suggestions, rejecting at last all but one. This we may do on several grounds. We may be swayed by the emotions and passions of the moment, by our own present wishes, or by the persuasions of others. Or we may try to estimate critically the alternative courses and to come to a decision

on more permanent grounds than those of present feeling and impulse. This is, of course, the only safe course to take in cases which are really difficult. I do not mean at all that in such deliberation intellectual considerations should be regarded as the only determinants of rational conduct. Due weight should be given to such factors as sense of duty, social solidarity, emotional bonds. Man is not mere intellect, and all attempts to regulate his life by purely intellectual principles are doomed to ultimate failure, and during the time they are accepted yield an abundant crop of human trouble and sorrow. The abstract economic theory which dominated much of English economic and political life in the first half of the nineteenth century furnishes a case in point. Looking only at the economic side of life it assumed individual material self-interest as the one motive-power of men. So long as one keeps to its abstractions its conclusions follow as certainly as do those of mathematics. But they have even less relation to actual life, in which the motives to action are very various and in which men do not exist as independent competitive units.

Sound judgement in human affairs, then, means an active intelligence which, as far as it can see them, tries to take account of all the factors, and to allow each its due weight. Such mental alertness is a habit, and grows in efficiency by practice. Like other habits also, it decays if not in constant activity, and in its place we have a slavish following of precedent, or acting blindly according to rule without regard to changes in the conditions under which the act is to be done. The efficient mind is avid of new experiences which will bring new knowledge. To learn is as essential to it as to breathe, to act on its learning as necessary as bodily movement.

This mental activity is shown in various forms. We do not all seek fresh knowledge in the same direction. Our search is governed by our interests, which are themselves the outcome of our experiences acting on our original capacities. Some there are, indeed, whose original capacity is so strong that it breaks through even the most incompatible surroundings, and, disregarding the experiences intended for it, seeks others that will satisfy the crying needs of the inborn genius. But in the majority of persons the dominant interests of life are not so inexorably decided by nature. There is, doubtless, in every individual a bias towards one class of experiences rather than another, but the development of the personal aptitude depends much upon whether occasions for its exercise be provided for it. It takes them, but it does not imperatively demand them.

Further, however strong may be one's special bent, the satisfaction of it cannot fill the whole of life. If, indeed, it fill too large a proportion of our thoughts, and govern too exclusively our actions, we become narrow specialists, whose special work itself will suffer from its isolation from the rest of the field of experience. In the conduct of life we need wide and varied knowledge both of men and of things, or many are the practical mistakes we shall make.

It follows that as education seeks to prepare for life it should secure a wide range of knowledge, both for its direct bearing on life's problems and because only so can occasion be given for calling out the special interests of a number of pupils taught together. But it follows with equal truth that this knowledge must really enter into experience so as to form organs adapted to meet and deal with a variety of calls. We may try to give

knowledge and intellectual skill apart from each other, and to some extent we may succeed. But neither is real and fruitful. Knowledge which does not light our path gives us no help in difficulty ; it is at best a source of delight in times of ease : skill which has no material of knowledge to work upon is only a kind of conjuror's adroitness applied to ideas specially made for its purposes.

Mind does not grow by its own activity, nor by what it absorbs, but by its own working ; and working implies both activity and material. Its growth is gradual and continuous, nor can we lay the whole process bare. We judge the stage it has reached by the kind of problems it attacks and by the kind of solutions it suggests.

A young child often asks "Why?" but it is satisfied with any kind of answer, for its brief and meagre experience does not enable it to test the answer critically by other and pertinent knowledge. So, too, its very lack of knowledge allows its interest to be satisfied almost as soon as it is awakened, and it turns its enquiries towards the next thing that arrests it. Indeed, in early years there is no true *seeking* for knowledge, but only a preliminary glance at what there is to know.

So, too, there is no power to determine conduct except in customary circumstances, where adherence to simple rule or the following of impulse enables the child to act without seeking special guidance. Often he finds he has made a mistake, and that what he has done is condemned. By such experiences he gradually builds up a greater skill in acting so as to win the approval of those he loves. This means that he is becoming more critical of his impulses, and is learning to try them at the bar of conscience by the regulations laid down by authority. A further advance is marked by a growing power of

adapting the interpretation and application of the rules to more varied cases, and consequently an increasing insight into both the motives and the consequences of various modes of behaviour. A much later stage is the explicit study of the rules and maxims he has hitherto received, so as to determine their real meaning and scope. This can hardly be effectively entered upon much prior to adolescence. The ultimate stage of criticism of the rules themselves—trying them by some more ultimate standard and affirming, modifying, or rejecting, them—requires for its profitable undertaking a fullness of experience, a ripeness of judgement, and a control of passion, which are not to be attained before manhood.

Growth in judgement, then, is marked by increasing depth of comprehension. This can result only from increasing power to keep the same topic before the mind ; so that, perhaps, the most obvious sign of mental growth is extension of the period during which the attention is concentrated in one line of interest, and the frequency with which it returns to it after any distraction. For strength of interest is not to be gauged merely by the concentration of attention at the moment, but yet more by its recurrent power.

Increase in the duration of attention implies that the object attended to becomes more and more full of challenge to the mind. For when there is no question to answer there is nothing to which to attend. Thus there is increasing richness in suggestion from past experience ; more analogies occur to the mind, more meaning is in the thought. It is this, indeed, which leads to the fuller comprehension, for every such suggestion is an expectation prompting to its own realization. But some of them prove unacceptable, impossible, or

inconsistent with what is already known. So grows that power of discrimination and choice of suggestions as deserving further trial in which the child is so deficient and which in the skilled worker in any department has become almost automatic. An expert student of science seeking an explanation of an observed phenomenon rejects many suggestions before they have really taken form in his thought. Their unsuitability is felt, and so need not be thought. But the immediacy of the rejection is the effect of skill, perfected by long practice, and involving both abundant pertinent knowledge which is taken for granted and the trained intelligence which can act on this knowledge without making it explicit, or, indeed, in many cases, implicit.

This power of critical discrimination can only act in the material in which it has grown ; for its very essence is the immediate feeling of incompatibility or compatibility with knowledge which is taken for granted or is, at most, implicit. If that knowledge be small, the judgement has no guarantee of soundness. No matter how perfectly one has been trained in mathematics, in the grammar of the classical languages, or in some branch of physical science, yet that training can not fit one to decide justly in matters in which one is devoid of this organ of knowledge. It is because this concrete nature of mental criticism has not been recognized that it has been believed that the judgement is a faculty independent of knowledge.

In so far as education is the training of sound judgement it obviously continues throughout life. After our days of formal education by others we must take up the task ourselves. For it is very evident that comparatively little progress can have been made by the time

the days of formal education are over, even when they are extended to the university stage ; while for the vast numbers of children, whose real training by others ceases at thirteen or fourteen, only the first steps can have been taken. So we must not say that it is the duty of the school to form a sound judgement, but only to begin that formation in such a way that it may be continued on right lines. Children of school age have but little knowledge and but little intellectual skill. The question whether that knowledge and skill are to atrophy after school days are over or are to continue to grow in a sane and healthy way is of the utmost importance. Growth there will certainly be, but it may be distorted, and in consequence lead to a useless or, possibly, a mischievous life.

Evidently the direction growth will take is a matter of interest and habitude. A teaching which ensures that the learning shall be the real work of the mind which learns, that the learner shall test his own advances, and that he shall be accustomed to detecting and rejecting the errors to which the human intelligence is most prone, will gradually develop a cautious and critical attitude, and cultivate an interest in really seeing the bearings of things.

Without the guidance of teaching, such learning could make, at the best, but a very small advance. It is only when a challenge from without is felt that mind turns its activity in that special direction. Such a challenge appears as something novel and strange. But mind has an almost unlimited power of becoming accustomed to its own surroundings. These are full of matters not understood, though every one of them is a possible problem. They do not become actual problems till in

some way they interfere with our activity. Intelligence first develops within the scope of instinct when an instinctive movement is in some way hindered, or an instinctive impulse disappointed. And afterwards intelligence works only when automatism fails. If we were left throughout life to such accidental spurs to curiosity our enquiries would go but a little way. Indeed, the very superficial character of our understanding of most of our material surroundings is sufficient proof of this. The most familiar is often the most imperfectly known. How many of us, for example, can say off-hand how many steps there are in the flight of stairs up and down which we pass many times a day?

Most of the challenges to enquiry come to us from others, and come in many ways. Imitation, from our present point of view, is an enquiry into the reason and the value of an act we have seen done by another. The ordering of our lives while we are young is full of such implicit challenges to us to understand why we are so ruled. These, however, are desultory and unsystematic, and the mental alertness which they awaken is easily satisfied. The very essence of definite teaching is continually to challenge the mind of the learner by showing him problems which it is worth his while, and within his power, to solve. In this way instruction fulfils its educative task of accelerating and improving that development and growth of intelligence, which without it would be arrested at a much earlier stage than that which it may reach with this external stimulus.

Instruction, then, fulfils its true task only when its pupils grow in real intelligence; that is, both in the desire and in the power to solve increasingly difficult problems of conduct and of knowledge. That this has not always

been the outcome of school instruction is but too certain. Instruction which does not develop intelligence must, in one way or another, hinder its growth, simply because the school occupies so much of a child's time and determines so largely the mental habits he forms. An instruction which takes no account of its pupils' felt needs, which compels instead of inciting, develops stupidity instead of intelligence. For stupidity is the opposite of intelligence. It is the lack of both the wish and the ability to solve problems whether of life or of thought. The stupid person fails very often even to see that there is a problem, for his mind is not alert and so it does not notice how this situation differs from previous ones. In practical matters he acts on rule or on impulse. In intellectual matters he cannot be convinced, because he cannot see the force of arguments which make against his own wishes or preconceptions. Or he is frivolous and flippant, and can interest himself in nothing which demands real thought. In any case there is an absence of critical power, and this absence is exactly proportioned to the degree of stupidity.

No doubt stupidity may be innate, and, in some degree, it frequently is. But when we meet a stupid person it is impossible to say how the responsibility for his dullness should be shared between nature and nurture. "There is abundant evidence that a child of normal capacity may be trained to a degree of stupidity resembling innate feeble-mindedness, or to a degree of wrong-headedness resembling insanity, or, on the other hand, to a degree of intelligence which, relatively speaking, resembles genius."¹

The normal child is the material with which the

¹ Archdall Reid : *The Laws of Heredity*, p. 477.

educator has most commonly to deal. Of course, there are an indefinitely large number of gradations within the range of normal capacity, and it is impossible to lay down the precise boundaries which, on the one hand, mark off the genius, and, on the other, the fool. A school failure, then, is a far more important matter than a paucity of remembered facts. It is an unfitting for life. Nor is there then any remedy. A school must cultivate either intelligence or stupidity: in so far as it fails to do the one it assuredly does the other.

Though teaching accelerates development it does not change its course. This is where the unintentional cultivation of stupidity so often comes in. Lessons fail to evoke desire, either because they present matter outside the range of natural—that is, possible—interest, or because they either confuse learning by rote with thinking, or actually regard the former as the right mode of acquisition. This is only to say that teaching is mischievous when it is not the application of psychological knowledge. The application may be implicit, or the teacher may be so familiar with the working of his pupils' minds that the psychology can be taken for granted. That, indeed, is when it is most effective. Skill in teaching does not differ from other forms of skill in its practically automatic use of the knowledge most essential to it.

There is no need to repeat the analysis of the mode in which knowledge which is also intelligence grows. Suffice it to recall its essential features. It is throughout an individual work. A teacher can make his pupil say the same words as he says, but he cannot in the same way make him think the same thoughts. The test of that cannot be found in the pupil's words; it must be

looked for in his deeds, mental or physical. So, too, it is throughout a process in which everything that can be made the explicit object of attention must first be implicit in some whole which is explicitly attended to. Thus, all advance in understanding is an advance towards systematic knowledge. Relations between objects of perception are at first implicit, and are next explicitly thought as holding in the case or cases studied, then generalized and thought as holding between all such objects. For instance, a child strikes a match to get a light long before he explicitly thinks of the striking as an efficient cause of the lighting. That may become explicit to him if he want to strike a match but can find no suitable rough surface handy. If left to himself he will probably generalize that all matches will light by striking on a rough surface, but only implicitly and practically ; that is, he will so proceed whenever he wishes to light a match. But if a definite question be put to him as to how to light a match he will at once explicitly state his generalization. So far there has been no critical thought. If now he try to strike a safety match on a rough surface which has not been suitably prepared he fails to achieve the desired result. What happens? If left to himself, and if he cannot light it after several trials, he probably assumes that the match has something wrong with it, and throws it away. If, however, someone ask him why the match did not light, then a problem is placed before him which to some extent he can solve. It may be assumed that he cannot make a chemical analysis either of the match or of various surfaces, and that, moreover, he has not the preparatory chemical knowledge of the constituents required to secure lighting without which such analysis would be meaningless and

unguided. But he can suggest certain reasons on the level of his knowledge and intelligence, such as—the match might be wet, or there must be something peculiar in a surface on which striking it produces a light. He can also test these suppositions; the former one fully, the latter one sufficiently to attain practical certainty. For he can ensure that the match is dry, and finding that still it will not light on ordinary rough surfaces he rejects the first suggested explanation of his previous failure. Then, by trying many rough surfaces, including that provided by the match-box, he is satisfied by the evidence that there *is* some peculiarity in that surface. Comparison with the striking of an ordinary match will lead him to the further conclusion that there is also a peculiarity in the safety match itself, and that the two peculiarities work together and are related to each other. Another problem may thus be presented by the difference between the striking of a safety match and that of an ordinary match, and he may infer, reasonably enough, that in some way these two peculiarities are combined in the ordinary match.

So far we keep close to the perceptual and practical level. Though we are dealing with general relations we are presenting them in one concrete case. That further problems are left unsolved is evident, for the nature of the peculiarities has not been investigated. Nor could a child at the early age assumed profitably investigate them. That this is so is shown, indeed, by the fact that though he may recognize that this further enquiry might be made he has no desire to make it. He has carried explanation as far as he is capable of using it. His general knowledge and his general idea of explanation must be much more fully developed before he tries

to go further. In this special case, as in many others, the great majority of people never do attempt to attain a more perfect explanation.

Only so far as a mind is set to test its own suggestions, either by comparison with what it already knows or by a comparison of its own results with independent facts, is it trained in critical thought, or learning to estimate evidence. Here is a fruitful source of scholastic error. For a young man it is certain that physical science is a most valuable mental discipline. In studying it he not only acquires knowledge which plays an increasingly important part in modern life, but his learning can, and should, be throughout a solving of problems, and a testing of his own suggestions. To assume that the subject will have the same value for mere boys is to ignore the essential differences between the stages of development reached by the two classes of pupils.

A boy's suggestions are mere guesses at truth, flowing naturally from the tendency of the undeveloped mind to generalize every one of its experiences—a tendency due to the fact that differences have not been thought explicitly. To allow such guessing is to train in uncritical thought, that is, in the acceptance of any evidence which first comes to hand, without enquiry into its relevancy or adequacy. Yet, if the guessing be not permitted, the generalizations must be given by the teacher simply as statements of fact. If it be urged that generalizations should be excluded altogether, the answer is that this is hardly possible, and, if it were, the root of the objection would not be met. For such exclusion would reduce the aim of the teaching to the formal one of making the observations of the children more exhaustive and more precise. This is to secure the learning of

mere facts, and it must be insisted that unrelated facts are equally valueless whether learnt from observation or gathered from the speech of another. Facts, as facts, are only mental lumber, no matter whence the knowledge of them is derived. Only as they can be thought into a growing system of knowledge are they of any worth.

It is because it is hard to teach thinking and easy to teach facts that schools have often cultivated stupidity instead of intelligence. "The best of all teachers is one who does not merely state, nor even explain, the relations between facts, thereby doing little more than adding new facts to the rest, but who so guides his pupils that they are led to do their own thinking and make their own discoveries."¹ It is true that all teachers cannot become "the best," but all can teach on the lines which lead to that pre-eminence.

Stupidity may, then, be directly cultivated by making a full memory of facts the one thing needful in school. It may be cultivated nearly as readily by calling for no real effort on the part of the pupils. This is a very prominent danger in the present day. The popular confusion between interest and recreative amusement, combined with an unduly low estimate of children's powers and a kindly desire to avoid intellectual over-pressure, is responsible for much wasting of time and strength, and for much failure to train both character and intelligence. Intellectual over-pressure doubtless is possible, either because the memory of too many facts or the second-hand acquirement of too many demonstrations is demanded. But when the work is the solving of problems felt as such by the mind of the learner, intellectual over-pressure is scarcely possible with the young,

¹ Archdall Reid : *op. cit.*, 481.

who are over-pressed from without, not from within. It is *bad* learning, not too *much* learning, which causes over-pressure ; and the over-pressure is then itself a sign of relative stupidity : it means that the mind fails to deal with what is presented to it. It is over-loaded because it is not nourished and exercised.

The calling for effort, however, must be for effort which is possible. Nothing develops stupidity more readily than a conviction of stupidity, and this soon arises when the problems set are outside the range of the child's powers. Unhappily it is not superfluous to remark that for the teacher ever to express a judgement of stupidity is often unjust and always unwise. The apparent stupidity may be the result of bad teaching—bad in not being adapted to that individual capacity, if for no other reason. Moreover, it may be only apparent, and in any case its one possible cure is hopeful effort. To assure a boy that he is dull discourages and impedes his efforts. If the assurance is believed the child is injured for life, for the very spring of effective action is weakened in him.

Educative effort is, therefore, proportioned to the pupil's strength. On the one hand, the requirements of learning should not be so small that he can master his lessons without real work, nor, on the other, so large that he stands confused and helpless before them. Here is one of the chief practical difficulties of teaching. It is easy enough to lay down an abstract rule of graduation according to strength, but the virtue of such a rule—as of all educational maxims—lies in its application. No matter how well a teacher knows his pupils, it is not an easy task to arrange that while one is not left to the frivolity of what to him is mere intellectual child's play, another is not asked for efforts beyond his powers and

which, therefore, he cannot put forth. To set always the same intellectual problems to a whole class, or to expect the same type of solutions from all its members, is to secure one, if not both, of these evils.

All teaching which does not stimulate real and careful thinking makes for stupidity. It may be the stupidity which in later life shows itself in obstinate prejudice. Often this euphemistically disguises itself under the name of conscience, or of party loyalty. Its essence is that the mind is closed against all considerations which oppose its belief. Even facts must give way before it, or at any rate the record of unpalatable facts is not accepted. "The testimony is, in the receiver's mind, of a low order; the proposer is a radical, and the receiver is of opinion that a radical would pick a pocket; or else, perhaps, the proposer is a tory, and the receiver is of the belief that a tory must have picked a pocket."¹

Such an attitude of mind takes conviction as a test of truth, ignoring the fact that others hold exactly the opposite view with equally firm assurance. This form of stupidity is the natural outcome of too dogmatic a teaching. It is not merely that the teacher sets forth what he believes to be true, but that he encourages no investigation into the evidence on which that conviction rests. Such investigation is not a questioning of the truth itself. When a child who has learnt by various measurements certain geometrical relations is led to seek for the evidence on which he may safely believe that those relations hold universally, he is not questioning their truth. Owing to the immaturity of the young and their little knowledge and experience their questionings must usually take this form. The attitude which is critical

¹De Morgan : *Formal Logic*, p. 263.

not only towards evidence but towards generally accepted truths comes later, when it comes at all.

Yet it is good for even boys and girls to know that in many matters there is much to be said on both sides : in other words, that all opinions are not guaranteed truths. Immersed as they are in a definite social atmosphere, in which certain views of life and conduct are accepted as matters of course, they are, of necessity, growing a fine crop of prejudices. It is of no use to trust that the study of some rigidly demonstrative subject, such as mathematics, will cultivate a suspicion of ungrounded assumptions in matters of life and conduct. It is just because mathematics is so rigid that the form of reasoning cultivated by it is not easy to apply to the affairs of life, and when it is applied is more likely to lead us wrong than right. In this it is like formal logic. Life is too full and complex to be expressed in syllogisms. So it is that quite reasonable people feel a distrust of such logic. They recognize that inevitable as its conclusions may be on the assumption of the truth and adequacy of its premises, yet that truth and adequacy generally cannot be granted. For example, setting forth with the assumption that cheapness is the greatest economic good, the advocates of Free Trade argue that competition open to the whole world will secure the greatest cheapness ; that, therefore, there should be no hindering custom duties. On the other hand, those who advocate the imposition of import duties urge that abundance of regular employment is the greatest economic good, that such duties would encourage home production and so would necessarily increase employment ; therefore, that such duties should be levied. Each syllogism seems irresistible when taken alone and in

detachment from the actual conditions of life. Yet we know that each conclusion is rejected by many of those who have really studied the subject. Of course, those who merely shout on the one side or the other because these matters have been made party cries simply exemplify the evil influence of prejudice. They count not at all at the bar of reason ; only at that of the polls.

When we ask why either of these syllogisms fails to convince an opponent we find the first answer to be that its assumptions are not granted. The two major premises are obviously incompatible, and each of the minors may be disputed. The advocates of duties may urge that cheapness ultimately results from supply being in some excess of demand, and that if the imposition of import duties increase production at home it is quite possible that this increase may more than compensate for the foreign goods excluded. Or, on the other hand, the free traders may argue that duties by decreasing import trade would necessarily decrease the export trade which pays for it, that it is the export trade which gives most employment to our manufactures, and, therefore, that such duties would decrease employment. This is not the place to work out all the possible ramifications even of the economic arguments, and even if we did so the matter would still be unsettled, for no account would have been taken of national or imperial sentiment.

In such a case we feel that abstract arguments are mainly of worth for overthrowing an adversary, and that in this they are most effective when we first provide him hypothetically with the arguments we then proceed to refute. So it is in all that concerns the real affairs of life. Strictly logical argument is always abstract ; life is always concrete.

It does not follow that the rigid reasoning rightly called logical should be omitted from teaching; only that it should be confined to matter to which it is really applicable, and that its abstract and hypothetical character should be made plain. It is abstract in that it takes no account of any conditions which may interfere in reality with the aspect or relation it is examining. It is hypothetical in that its whole validity rests on certain assumptions. To be clearly conscious of all we assume is neither usual nor easy. For example, the recognition that any assumptions have been made is often a real difficulty with children in solving geometrical problems or establishing geometrical theorems. Good teaching makes a point of laying bare every assumption and of enquiring into its justification.

So, too, the abstract character both of a strictly logical process and of its conclusions should be made quite explicit. The laws of motion, for example, are never really proved directly. Friction and the resistance of the air always interfere. But it can be seen that the more these are reduced the nearer the actual concrete results approach the hypothetical results of the abstract laws. Further, that from the assumption of the truth of these laws consequences can be deduced to which again experiment yields approximation in proportion as interfering agents are excluded. Thus it may be made plain that real concrete cases only approach the theoretical result, and that the degree of nearness could be calculated if we could measure the influence of all the interfering conditions. Then the use of delicate instruments becomes more apparent.

In such a process of learning the pupil criticizes first his theoretical result, then his experiments, then the actual

result they yield. Throughout he is trying to seek explanation, not in the loose sense of a broad and untested generalization, but in the application of such a generalization to facts. He does not doubt the law, but he examines critically the evidence which supports it. When, before working an experiment he predicts the result, not in general terms but with precision, he recognizes that his prediction is only probable, and that the degree of its probability depends on the accuracy with which he has gauged all the operative forces.

Now, reasoning in concrete affairs is always of this probable character, and when the matter includes men and women as factors the task of setting forth all the conditions and estimating each at its true value is one which cannot be performed with precision. True, the mathematical theory of probability can deal with cases where all the possible alternatives can be known, as in the tossing of a coin or the casting of a die. But we cannot express human motives and deeds in fractions. All we can say as evidence accumulates in support of a certain proposition is that it becomes increasingly probable, till a degree of likelihood is reached which we commonly speak of as practical certainty, because it is universally regarded as a sufficient ground for action. "It is by the strength, variety, or multiplicity of premises, which are only probable, not by well-connected syllogisms,—by objections overcome, by adverse theories neutralized, by difficulties gradually clearing up, by exceptions proving the rule, by unlooked-for correlations found for received truths, by suspense and delay in the process issuing in triumphant reactions,—by all these ways, and many others, the practised and experienced mind is able to make a sure divination that a conclusion is

inevitable, of which his lines of reasoning do not actually put him in possession. This is what is meant by a proposition being 'as good as proved', a conclusion as undeniable 'as if it were proved', and the reasons for it 'amounting to a proof', for a proof is the limit of probabilities."¹

In what way do schools begin to train the young in the estimation of such evidence as this? Generally, it is to be feared, the answer would be discouraging. Yet I do not doubt that, even in primary schools, very valuable work can be done, mainly in connexion with the reading of books. The general mental attitude of the unpractised reader towards a book is one of receptive successive understanding; the efforts of the learner are directed towards remembering the whole as fully as possible. This attitude becomes habitual unless some stimulus awaken the mind to the recognition that "some books are to be tasted, others to be swallowed, and some few to be chewed and digested; that is, some books are to be read only in parts; others to be read, but not curiously; and some few to be read wholly, and with diligence and attention."²

Such stimulus it is the teacher's function to supply. When a passage in a book of Bacon's last class is to be studied it should not simply be given out for reading, but the reading should be made a search for the answers to questions set by the teacher—questions which cannot be answered by merely copying a sentence or two from the book. The search for such answers trains the pupil to have a definite object in reading and so to put forth a more complete activity, to distinguish between what is

¹ J. H. Newman : *The Grammar of Assent*, p. 314.

² Bacon : *Essay on Studies*.

important for the purpose in hand and what is unessential, and so to get an idea of what constitutes evidence. The answering is a far surer test of what has really been learnt than is a reproduction of the whole, which may result from an activity little more than perceptual.

In his very suggestive book, *Studies in the Teaching of History*, Mr. Keatinge has given a number of examples of this kind of exercise applied to extracts from original historical documents, and in several places he has reproduced the actual answers written by pupils of thirteen years of age and upwards. The variety of problems that may be suggested is very great. After the pupils have learnt to find an answer to a direct question they may be set to estimate the worth of a piece of evidence by considering whether the writer shows party bias. For example, it is an easy matter, and one within the power of children of twelve or thirteen, to discover the nationality and the profession of the writer from the following extract from Roger of Wendover's *Flowers of History*, of course given to the pupils anonymously :

"Very grievous indeed was the downfall of our dear country England. . . . As aforetime on the inroads of the Danes, so now on the expulsion of the English by the Normans, the destruction of the people of the land was for the punishment of their sins ; for the nobles, becoming enslaved to extravagance and the luxuries of the table, did not according to Christian custom seek the church of a morning. . . . The clergy too, and others in orders, were so wanting in learning that one who had learnt grammar was an object of wonder to all the rest ; all classes were alike given to drinking, and in this pursuit they spent days as well as nights. . . . However, these bad reports are not to be understood as referring to everybody."¹

A direct problem suited for somewhat older pupils would be to find the purpose and the mode of the constitution

¹ From *Illustrative History : Mediaeval Period*, p. 1.

of the parliament of 1265 from the following translation of an extract from Stubbs' *Select Charters* :

"Henry, by the grace of God king of England, lord of Ireland, and duke of Aquitaine, to the venerable father in Christ, Robert, by the same grace bishop of Durham, greeting. Since after the grave occurrences of disturbance which have long prevailed in our realm, our dearest first-born son Edward has been given as a hostage for securing and confirming peace in our dominions, and as the said disturbance, blessed be God, is abated—for providing deliverance in a healthful manner for the same and confirming and thoroughly completing full security of tranquillity and peace to the honour of God and the profit of our whole kingdom, as well as concerning divers other matters which we are unwilling to decide without your counsel and that of the other prelates and magnates of our realm, it is needful that we have speech with them. We command you, desiring you by the faith and love by which you are bound to us that, putting aside all excuse and other business, you will be with us in London on the octave of St. Hilary next, to treat and to give your advice on the said matters with the prelates and barons whom we shall summon thither. . . .

Also it is commanded all the sheriffs of England that they cause two knights from the loyal, honest, and discreet knights of each shire to come to the King at London as said above. Also in the same form it is written to the citizens of York, the citizens of Lincoln, and to other towns of England, that they should send in the said form two of the discreet, loyal, and honest citizens and burgesses."¹

Other problems would be to sketch the plan of a battle from one account, or from a comparison of several accounts. Mr. Keatinge gives instances, too long to quote, in which the pupils were set to determine the plans of the battles of Bannockburn and Poitiers from several divergent accounts, thus receiving a direct training in estimating the value of evidence.²

¹ *Ibid.*, pp. 102-103.

² See *Studies in the Teaching of History*, pp. 67-78.

Exercises in comparison of evidence should not be given till some degree of expertness has been attained in more direct work. They should, however, never be omitted. The tendency to believe everything which appears in print, combined with the bias which keeps a man from reading anything which is opposed to his party views, is the foundation of the pernicious influence of party hacks of the baser sort, and accentuates the evils which a general power to read should mitigate.

That even eye-witnesses may in all honesty give accounts of the same scene which differ a good deal even on important points can often be illustrated from school life. A simple exercise will, however, bring home the treachery of memory quite definitely. Let the teacher read in private to one pupil a fairly long anecdote, and then request him to write it out as accurately as possible, and desire him not to communicate with any of his classmates on the subject. Let his written account be then read privately to the next boy and the same instructions be given to him, and so on till every boy has written what he remembers of what was read to him, each exercise being numbered according to its place in the series. We then have a series of versions, each of which was derived only from the preceding one and was the sole source of that which follows it. The reading to the whole class of the original story and of the last reproduction will bring home to its members with irresistible force that despite their efforts to be exact, much alteration has been actually made in the story. This will help them to conceive a very healthy distrust of rumour and common report. If it be desired, the gradual rise of the error can be traced by comparing the exercises in order, but if this be done

great care must be taken not to throw suspicion on the good faith of any individual.

Let it not be thought that this would be a waste of time. The lesson in the need of a critical attitude towards testimony is invaluable. From many careful examinations of depositions made upon oath M. Binet concludes that "it is established that when the deposition is made in good faith it is never entirely false, but only contains false details ; neither is it ever entirely exact from beginning to end. There is always a mixture of truth and error ; and if the amount of error may become very small in many cases yet it hardly ever falls to zero ; and all the witnesses who have been tested are found to have affirmed upon oath false facts, in a proportion which may be approximately put at twenty-five per cent."¹ To bring home to our pupils that the most perfect good faith cannot be taken as absolute proof of accuracy of statement is an admirable corrective to the natural feeling that to doubt a piece of evidence in any one point is to reject it as a whole, and to throw a doubt on the honesty of its author.

To lead them by further comparison to see that bias will colour statements—whether consciously or unconsciously need not be determined, for that is a matter of indifference in estimating the value of evidence—is still more to put their minds in that alert attitude which alone even attempts to sift the reports and current statements which play so large a part in our lives. A simple exercise of this kind would be to seek probable truth from a comparison of the two following extracts, the pupils knowing that the first is from a letter of one of the most zealous of English bishops to the Pope, and the

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¹ *Les idées modernes sur les enfants*, p. 189.

second from a satirical poem written about a century later and intended rather to expose abuses than to paint a scrupulously fair and accurate picture—

A. *From a letter of Bishop Grosseteste to Pope Gregory IX.*

“Your Holiness may know of a surety that inestimable service hath been done in my diocese by the aforesaid brethren [*i.e.* the Friars]. For they enlighten our whole land with the bright light of preaching and doctrine. . . . O that your Holiness could see how devotedly and humbly the people run to hear the word of life, to confess their sins, to be instructed in the rules for daily life, how much profit the clergy and the monks take from the imitation of them ; you would immediately declare that to them that dwell in the shadow of death hath the light shined.”

B. *From Langland's Vision of Piers Plowman.*

“I found there Friars all the four orders,
Who preached to the people for profit of themselves,
And glozed the gospel as seemed good to them,
And for covetousness of copes construed it as they wished.
Many of these Master-Friars may clothe themselves as they please,
For their money and their merchandise march together.”¹

It is not only in history that material for training in the critical consideration of evidence may be found. Travellers' tales furnish similar problems, especially when an earlier is compared with a later writer, and the question arises how far the differences may be due to the lapse of time. In solving such problems the pupils should always be encouraged to bring to bear all of their knowledge which seems to them in any way pertinent, and not to hold themselves confined to the limits of the passages before them. That would be to fall into the same kind of narrow limitation of reference which causes formal logic to be so suspect in reference to the actual affairs of life.

¹ *From Illustrative History : Mediaeval Period*, p. 99.

Professor A. C. Bradley's Lectures in *Shakespearean Tragedy* are full of literary problems arising out of Shakespeare's four greatest tragedies, many of which could profitably be studied by the older pupils in secondary schools, and a few by the younger boys and girls. As an example of the simpler we may take the discussion of the question whether Othello was black or brown—

"Now I will not say that Shakespeare imagined him as a Negro and not as a Moor, for that might imply that he distinguished Negroes and Moors precisely as we do; but what appears to me nearly certain is that he imagined Othello as a black man, and not as a light-brown one.

"In the first place, we must remember that the brown or bronze to which we are now accustomed in the Othellos of our theatres is a recent innovation. Down to Edmund Kean's time, so far as is known, Othello was always quite black. This stage-tradition goes back to the Restoration, and it almost settles our question. For it is impossible that the colour of the original Othello should have been forgotten so soon after Shakespeare's time, and most improbable that it should have been changed from brown to black.

"If we turn to the play itself, we find many references to Othello's colour and appearance. Most of these are indecisive; for the word 'black' was of course used then where we should speak of a 'dark' complexion now; and even the nick-name 'thick-lips', appealed to as proof that Othello was a Negro, might have been applied by an enemy to what we call a Moor. On the other hand, it is hard to believe that, if Othello had been light-brown, Brabantio would have taunted him

with having a 'sooty bosom', or that...he himself would have used the words,

"her name, that was as fresh
As Dian's visage, is now begrimed and black
As mine own face."

"These arguments cannot be met by pointing out that Othello was of royal blood, is not called an Ethiopian, is called a Barbary horse, and is said to be going to Mauritania. All this would be of importance if we had reason to believe that Shakespeare shared our ideas, knowledge and terms. Otherwise it proves nothing. And we know that sixteenth-century writers called any dark North-African a Moor, or a black Moor, or a blackamoor. Sir Thomas Elyot, according to Hunter, calls Ethiopians Moors; and the following are the first two illustrations of 'Blackamoor' in the Oxford *English Dictionary*: 1547, 'I am a blake More borne in Barbary'; 1548, '*Ethiopo*, a blake More, or a man of Ethiope.' Thus geographical names can tell us nothing about the question how Shakespeare imagined Othello. ...

"*Titus Andronicus* appeared in the Folio among Shakespeare's works. It is believed by some good critics to be his: hardly anyone doubts that he had a hand in it: it is certain that he knew it, for reminiscences of it are scattered through his plays. Now no one who reads *Titus Andronicus* with an open mind can doubt that Aaron was, in our sense, black; and he appears to have been a Negro. ... Yet he is 'Aaron the Moor', just as Othello is 'Othello the Moor'. ... Shakespeare himself in a single line uses 'negro' and 'Moor' of the same person (*Merchant of Venice*, III. v. 42).

"The horror of most American critics... at the idea of

a black Othello is very amusing, and their arguments are highly instructive. But they were anticipated, I regret to say, by Coleridge, and we will hear him. 'No doubt Desdemona saw Othello's visage in his mind; yet, as we are constituted, and most surely as an English audience was disposed in the beginning of the seventeenth century, it would be something monstrous to conceive this beautiful Venetian girl falling in love with a veritable negro. It would argue a disproportionateness, a want of balance, in Desdemona, which Shakespeare does not appear to have in the least contemplated.' Could any argument be more self-destructive? It actually *did* appear to Brabantio 'something monstrous to conceive' his daughter falling in love with Othello,—so monstrous that he could account for her love only by drugs and foul charms. And the suggestion that such love would argue 'disproportionateness' is precisely the suggestion that Iago *did* make in Desdemona's case :

"Foh! one may smell in such a will most rank,
Foul *disproportion*, thoughts unnatural."

... Thus the argument of Coleridge and others points straight to the conclusion against which they argue."¹

The greatest benefit from such a passage will not result from its direct study. To the teacher it will be invaluable as a guide, but with this help he should endeavour to lead his pupils to attempt to do the work of collecting, comparing and weighing the evidence as far as possible by themselves. The point to be decided can be set as a problem. The references to it in the play should then be hunted out and set forth as arguments on the one side or the other. The teacher can then add to

¹ *Shakespearean Tragedy*, pp. 198-201.

the evidence by giving the illustrative passages from Elyot and the *English Dictionary*. Each pupil will by this time lean to one side or the other. The teacher then states the evidence about the custom of the theatre, but leaves his pupils to estimate its bearing on their provisional conclusion. If as a result all do not draw the same conclusion as probable, the position of the minority may be discussed. At the end it may be well to summarize the arguments somewhat as Mr Bradley has done. But it is not at all the teacher's place to insist dogmatically on the acceptance of his own conclusions: that would be to hinder, not to aid, the growth of critical power.

The attempt to decide literary questions largely on grounds of literary taste is, of course, only possible with pupils old enough and artistic enough to feel the consonance or incongruity of passage with passage. Again to take an example from Professor Bradley. Is the Fool's prophecy in rhyme at the end of *King Lear*, Act III. sc. ii., genuine or spurious—an addition made by the 'players'? Professor Bradley holds it to be spurious on the following grounds, in addition to the fact that "the speaker remains behind alone to utter the words after the other persons have gone off"—

"(1) The scene ends characteristically without the lines. (2) They are addressed directly to the audience. (3) They destroy the pathetic and beautiful effect of the immediately preceding words of the Fool, and also of Lear's solicitude for him. (4) They involve the absurdity that the shivering timid Fool would allow his master and protector, Lear and Kent, to go away into the storm and darkness, leaving him alone. (5) It is also somewhat against them that they do not appear in

the Quartos. At the same time I do not think one would hesitate to accept them if they occurred at any natural place *within* the dialogue."¹

Such an instance of reasoning which is felt by a competent critic to be conclusive admirably illustrates the impossibility of expressing all the factors which influence our judgement in the explicit terms demanded by formal logic.

Another advantage which results from such a critical thinking of books is a nicer perception of the exact force of words. The enormous increase in the output of printed matter during the last century has led to a very considerable lowering of the standard of precise expression among public writers. This has naturally reacted on the readers, till many words are commonly so generalized that they cease to mean anything in particular. What sense can a rational mind attach to a statement that something is "awfully nice"? While writing this chapter I saw a newspaper placard announcing an article on "State Organization the Secret of Germany's Prosperity," where, presumably, "cause" was meant, for certainly the State Organization of Germany has never been, nor could possibly be, a "secret".

It is difficult to say how far a loose use of language reacts on thought, but it is certain that it does so react, and that it tends to form a habit of slovenly thinking and of being satisfied with a grasp of meaning which is more often than not distorted as well as superficial. A minute examination of isolated words by way of definition helps but little to correct the fault. As has been already pointed out, a definition is quite a special and technical abstract of meaning. "No one from the

¹ *Os. cit.*, pp. 451 and 452.

sight of a horse or a dog would be able to anticipate its zoological definition, nor from a knowledge of its definition to draw such a picture as would direct another to the living specimen."¹ The attempt to express the real meaning of a passage by a synthesis of definitions of the words employed is in essence the same as dealing with thought on concrete subjects by formal logic alone. Indeed, formal logic actually makes the demand that each term shall be used in an unvarying and abstract sense. But real thought uses language rather than words; and in language the sense is found as a whole in the whole. It is not an artificial building up of separate stones of meaning each with its own unvarying shape. In any fine expression of thought the change of a single word affects the whole sense, and the whole sense colours the meaning of each single word. The artistic use of language, therefore, does not depend on a clear apprehension of definitions but on a sense of the appropriateness of each word in some particular context. In this connexion I cannot refrain from quoting an admirable passage from Guizot's *History of Civilization in Europe* : "There is almost always in the usual acceptance of the most general terms more accuracy than in the definitions, apparently more strict, more precise, of science. It is common sense which gives to words their ordinary signification, and common sense is the characteristic of humanity. The ordinary signification of a word is formed by gradual progress, and in the constant presence of facts; so that when a fact presents itself which seems to come within the meaning of a known term, it is received into it, as it were, naturally; the signification of the term extends itself, expands, and by degrees, the

¹ J. H. Newman : *The Grammar of Assent*, p. 32.

various facts, the various ideas which from the nature of the things themselves men should include under this word, are included.

“When the meaning of a word, on the other hand, is determined by science, this determination, the work of one individual, or of a small number of individuals, takes place under the influence of some particular fact which has struck upon the mind. Thus scientific definitions are, in general, much more narrow, and, hence, much less accurate, much less true, at bottom, than the popular meanings of the terms. In studying as a fact the meanings of the word civilization, in investigating all the ideas which are comprised within it, according to the common sense of mankind, we shall make a much greater progress towards a knowledge of the fact itself, than by attempting to give it ourselves a scientific definition, however more clear and precise the latter might appear at first.”¹

The very exercise, then, of finding an exact meaning in a given passage and of expressing it tersely and accurately ensures that care is taken to use language with some precision. The teacher in criticizing the pupils' answers should always be on the watch to detect looseness and ambiguity, and should lead the writer to enquire and to discover how the words he has used have distorted or misrepresented his meaning.

The loose use of words to which we are unfortunately so much accustomed is a sure sign of the wide diffusion of loose and superficial thought. People who have no clear meaning to convey do not feel the need for a delicate instrument of expression. One does not require a scientific balance to weigh a pound of sugar or a ton of

¹ Hazlitt's translation, Lect. 1.

coals. This superficiality is a mark of stupidity just as surely as is narrow prejudice and the vitiation of thought by strong party bias. For stupidity is always inability to deal with problems. The prejudiced man cannot see the force of arguments which make against his convictions; the superficial man cannot see the force of any arguments at all which go beneath the surface of things. The prejudiced man can only draw conclusions in his own mind from premises in harmony with his prepossessions: the superficial man cannot really reason at all; he either accepts the opinions and adopts the conclusions of those immediately about him, or is drifted hither and thither by his moods and whims. He is a veritable mental chameleon.

Whether a teaching which does not call forth thought produces the narrow or the shallow type of stupidity depends upon its character. Dogmatic teaching which bases every statement on authority and allows no investigation of evidence tends to develop the former. Teaching which aims at outward brightness—interest, falsely so called—and at removing all difficulties and calls for effort, with equal certainty cultivates the latter. In each, the nutriment offered to the mind consists of facts; in the one case stated, in the other observed. But as in neither case are the facts made into problems the solution of which is to be sought by the personal investigation of the pupils, so in neither case is intelligence cultivated. Each in place thereof cultivates stupidity in an appropriate form; though, doubtless, some individuals subjected to the one form of teaching may show in later life mainly the other form of stupidity. That simply means that inborn nature has been too strong for artificial training, and that, consequently, that training has rather passed over the mind than entered into it.

Inborn stupidity shows itself in a marked mental inertia. When this is really general ordinary education can do very little. But more often it appears only in certain directions, and these not infrequently coincide with the traditional school studies. The remedy is to find in what ways natural interest shows itself, and to make those the fulcrum of efforts to move the mass. It cannot be too strongly urged that to neglect this is to develop general stupidity instead of what is, at the worst, partial stupidity. Practical intelligence is often found united with theoretical obtuseness, just as a keen intellect is not infrequently accompanied by practical ineptitude. A sane judgement despises neither. Nor is it reasonable that scholastic opinion should confine its admiration to intellectual acuteness and should brand as stupidity all failure in that, quite regardless of the possibility of an equally important excellence on the practical and constructive side. A real study of psychology should help teachers to see that the traditional intellectualism of the schools is narrowly one-sided, and so is itself a sign of stupidity. And perhaps no stupidity is so hard to overcome as that intellectual stupidity which takes intellect as the one measure of life. This pedantry of the schools must be overthrown before a really systematic attempt will be made to check the cultivation of stupidity among the people.

CHAPTER XII

IDEALS

MAN is not bound down to the hard reality of the present. Amid much that is petty, even it may be sordid, in the daily task, much that dulls by its monotony, and much that depresses by its failure, he yet looks forward with hope and aspiration to brighter visions. Whatever his present condition

“Man partly is and wholly hopes to be.”¹

Even the dullest clod has his fairy vision. It may be a narrow, even a degrading, one; yet it is to him the light which brightens his path, for it shows him a picture which to his mind is better than the reality of his life. He may limit his hopes to sensuous pleasure, to increase of wealth, to ignoble revenge; but the hope inspires him whatever it may be. On the other hand, one's aspirations may soar to heaven and inspire the earnest struggle of the saint, or seek in highest art the realization of supremest beauty, or in social service the noblest perfection of human life.

Hope, then, is a reaching forward in spirit to something which is different from the actual, yet which we can see in imagination. We can imagine absent scenes and things when they are vividly described to us. Then

¹ Browning: *A Death in the Desert*.

the imagination works under direction ; it, as it were, imitates the description given. The scene we imagine, however, exists for us not only in imagination but in belief. We picture it, and on the evidence of others we pronounce it real either in the present or in the past.

This, too, is the nature of the imaginings of young children. They picture in fancy all kinds of objects and events, to us incongruous and incredible, but by no means impossible to them, nor, indeed, to our forefathers. The thirteenth and fourteenth centuries found no difficulty in believing as well as imagining such descriptions as—"The griffin is a beast with wings, and is four footed : and breedeth in the mountains Hyperborean, and is like to the lion in all the parts of the body, and to the eagle only in the head and wings. And griffins keep the mountains in which be gems and precious stones, and suffer them not to be taken from thence."¹ The twentieth century smiles in tolerant pity at the ignorance and credulity of the middle ages, which could accept such tales. But really the only foundation for our own want of faith is increased knowledge of the earth and its inhabitants. Despite that, an immense number of people a few years ago accepted without demur the "flying wombats" of that inventive author of travellers' tales "M. de Rougemont."

The mental process of constructing in imagination such a picture is the same whether it represent a reality or a fancy. Indeed, it would be impossible to decide which it did represent unless it could be constructed ; for till that has been done we have not the object present to our criticism.

¹ From Bartholomew Anglicus—about 1260 ; see *Mediæval Lore*, p. 152.

Such a mental construction is essentially a combination of meanings. Whether it take the form of a visual image is, as has already been pointed out, a matter of individual idiosyncrasy.

Our belief in our constructions is, then, limited by our knowledge, or, perhaps it would be more accurate to say, by our other beliefs. For, indeed, most of us would have to use 'knowledge' very loosely to say that it is knowledge which prevents us individually from believing in the existence of the griffin.

It is a different question, however, as to how the fiction of a griffin first arose. Was it deliberate invention? Did some poetical traveller or writer of travels imagine it by putting together qualities and attributes of known beasts? That seems certainly to have been the genesis of the flying wombats. If so, probably the origin was a desire to amaze the credulous, or to give a touch of life to a picture of strange lands, unchecked by adequate knowledge of the actualities of nature. Or did the griffin result from an imperfect perception—a perception, it may be, obscured by terror? We all know how terror, especially of the unknown, makes people see the non-existent, and changes the most harmless objects into the most fearsome portents. Historically we cannot answer the question as to the griffin, or in any other particular case. But when one reads the travellers' tales of a few hundred years ago one is inclined to adopt as the most plausible hypothesis that both mistaken perception and deliberate enrichment of reality had been at work.

The point is this. Whatever origin we may think most probable for such imaginings, we must note that the creature imagined was never outside nature in any

of its qualities, but only in their combination. Assuming, as we must surely assume in some cases, the deliberate fabrication of monsters, and remembering that the ignorance of geography in the middle ages, the traditional belief in magic, the absence of scientific explanation of the most ordinary natural phenomena, all made people eager for marvels, we may regard it as certain that the constructed creatures were made as terrible and fantastic as possible. The conclusion that all human imagination is bound to reality is irresistible. It may, indeed, see reality transfigured with a glory not its own—a glory which the divine light of hope sheds on our path. Has not each one of us imagined a coming event—a holiday, it may be, or the making of a speech—and seen it in colours much more roseate than the actual event justified? Have we not, on the other hand, anticipated evil which has never come, or which coming has proved to be by no means unbearable? “Coming events cast their shadows before”, but the shadow is not always of the same colour as the event.

It is by no means implied that increase of knowledge checks imagination. As the raw material of every imagined product is simply the known, it follows that the greater the knowledge the wider the possibilities of imagination. So, for the crude suggestions of the savage are substituted the wide hypotheses of modern science, and the simple expressions of primitive emotions of early writers are replaced by the complex analyses of character of the modern poet and novelist. “The great dramatist makes none of his characters out of nothing. If they live, they must all be based upon what he knows of other men and what he knows of himself. And his knowledge of other men is, in turn, based upon his

knowledge of himself. For that is the only complete knowledge of human nature that he can attain to. He observes, and divines the meaning of what he observes, by a scientific process, for in other men he sees only outward symptoms. In himself he can connect these outward symptoms with the inward operations of his mind ; and so he comes to understand the inward operations of other men's minds by supposing the same connexion. Thus his experience helps his observation, and his observation helps him to understand the significance of tendencies in his own mind that are perhaps constantly suppressed. Out of those suppressed tendencies he will make many of his characters, imagining them not suppressed but favoured by circumstances different from his own and free from his own inhibitions. ...For imagination is encouraged and enriched by knowledge of all kinds, and flags for the want of it. Knowledge is, as it were, the soil by which the flower of imagination is nourished ; and, the greater the writer, the greater his passion for knowledge and the more use he can make of all that he knows."¹

The play of imagination round the circumstances of our life is as natural as is the perception of the objects actually present to us. Certainly, as with every other human power, there are personal variations both in its strength and in its form, but absent it never is. It is impossible to limit life to reality and to banish all imagination. To do so would, indeed, even if it were possible, be the most cruel blow that could be inflicted on mankind. Take away all we hope and long for, hide from our spiritual gaze all that is nobler, better, and more beautiful than the common things of our work-a-day

¹ Article on *Fiction and Knowledge* in *The Times*, Aug. 23rd, 1910.

life, and we are reduced in all essentials to the level of the beasts. For us, as for them, this life is all, and this life is confined to the sensuous experiences of the moment. The most distinctively human gift of humanity is the power to conceive a good not yet attained ; perhaps never to be attained. So for each one of us it is a "great truth that it is our best moments—not our worst—that reveal our real selves: that if we would judge righteous judgement, we must appraise a man according to the good that he would and did not, rather than according to the evil that he would not and yet did."¹ Indeed, the whole progress of the human race has been due to its imaginings of better things, and its efforts to make those imaginings real. The treasures left us by the past—whether it be art or literature or music or law or social organization or morality or religion—are all embodiments of imagination. Without imagination man can conceive nothing higher than himself. To him God Himself could not reveal Himself, for the revelation could neither be received nor understood.

If, then, imagination be an integral part of human nature, and so valuable an one withal, if it can work only with what it knows, if its direction be determined by the desires and interests of life, then education fails woefully if it neglect to deal with it. For, like all our powers, it may be exercised on unworthy matter.

"Give to imagination some pure light
In human form to fix it, or you shame
The devils with that hideous human game :—
Imagination urging appetite !

¹ Ellen Thorneycroft Fowler : *Kate of Kate Hall*, ch. 22.
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Thus fallen have earth's greatest Gogmagogs,
 Who dazzle us, whom we can not revere :
 Imagination is the charioteer
 That, in default of better, drives the hogs."¹

A sadly inadequate apprehension of human nature and its needs underlay the so-called 'practical' conception of education which was so prevalent in the middle of the last century, and which in its spirit and essence was not exaggerated by Charles Dickens when he made Mr Gradgrind expound his views on the subject—

"Now, what I want is, Facts. Teach these boys and girls nothing but Facts. Facts alone are wanted in life. Plant nothing else, and root out everything else. You can only form the minds of reasoning animals upon Facts: nothing else will ever be of any service to them. . . .

"You are to be in all things regulated and governed . . . by fact. . . . You must discard the word Fancy altogether. You have nothing to do with it. You are not to have, in any object of use or ornament, what would be a contradiction in fact. You don't walk upon flowers in fact; you cannot be allowed to walk upon flowers in carpets. You don't find that foreign birds and butterflies come and perch upon your crockery; you cannot be permitted to paint foreign birds and butterflies upon your crockery. You never meet with quadrupeds going up and down walls; you must not have quadrupeds represented upon walls. You must use . . . for all these purposes, combinations and modifications (in primary colours) of mathematical figures which are susceptible of proof and demonstration. This is the new discovery. This is fact. This is taste."²

¹ George Meredith : *Modern Love*, xxxviii.

² *Hard Times* : chs. 1 and 2.

We smile now at the philistinism of it all. But it was a very real thing to millions of children whose mental food was, in deference to the prevailing materialistic utilitarianism, restricted to the "three Rs", and even what they read confined as closely as possible to bald statements of fact. What could be the result but a lowering of the love of all that is bright and beautiful, and an increased tolerance of all that is ugly and dismal? One does not find many traces of "merrie England" in the slums of a big manufacturing town, and too often one sees the imagination acting, in one way or another, as the "charioteer that drives the hogs."

Amid the squalor and hideousness which surround thousands of lives it is hard indeed for the divine spark of imagination to fly upwards. Imagination can only work with materials gathered from experience, and so for many a child it is confined to the sordid and the base, except so far as the school supplies the deficiencies of the life outside its walls. For in life what is the present but an incentive?

"Man never *is*, but always *to be* blest;"¹

and the form of the blessing he desires and esteems is moulded by his daily experiences. To seize the best elements in the present and to make them the stepping-stones to the future is the true secret of life.

"He fixed thee mid this dance
Of plastic circumstance,
This Present, thou, forsooth, wouldst fain arrest :
Machinery just meant
To give thy soul its bent,
Try thee and turn thee forth, sufficiently impressed."²

¹ Pope : *Essay on Man* ; Ep. i., l. 92.

² Browning : *Rabbi ben Ezra*, xxviii.

Yet how seldom does the future fulfil our anticipations. Are we then to despair? Many do, and forget that what was future is now present, and, like the former present, infused with promise of a further future.

“Ah, but a man’s reach should exceed his grasp,
Or what’s a heaven for?”¹

is true at every moment.

“Then life is—to wake not sleep,
Rise and not rest, but press
From earth’s level where blindly creep
Things perfected, more or less,
To the heaven’s height, far and steep.”²

All despair, all turning aside from the narrow way of the struggle towards perfection, means a failure in imagination—a losing hold of what we have hitherto regarded as for us the ideal of life. To put it in another way: it is the strength of our ideals which is transfused into our efforts. So that, while an ideal is imaginative in its transcendence of reality yet it is at the same time inspiration. We may, indeed, say that every ideal is a purpose embedded in feeling and transmuted by imagination into something higher and better than experience has given us. Of course, the ideal of one may be the realized present of another, and the ideals of a child are necessarily below the accomplishments of mankind. But to him whose ideal it is, an ideal is always beyond the reality of *his* experience. So it is the spur of his efforts.

The loss of ideals is, then, the loss of power and, what is worse, the loss of desire for power. This is the very essence of degradation of life.

¹ Browning: *Andrea del Sarto*.

² Ibid.: *Asolando: Reverie*.

"Let a man contend to the uttermost
For his life's set prize, be it what it will !

And the sin I impute to each frustrate ghost
Is—the unlit lamp and the ungirt loin."¹

Yes, "the unlit lamp" of imagination means "the ungirt loin" of noble effort.

Yet there is a temptation to those of emotional and sensitive temperament and in whom the spring of action is weak to rest content with beautiful imaginings. Their souls are satisfied with unreality ; they love to be spectators at a beauteous phantasmagoria, not combatants in the fierce turmoil of life. Such persons often find it easy to take a cheerful view of life, because they instinctively turn from what is painful and distressing to them. Not because they have faith in the ultimate triumph of good over the actual evil of the present, but because they ignore that evil, they are able to say

"I find earth not grey but rosy,
Heaven not grim but fair of hue.
Do I stoop ? I pick a posy.
Do I stand and stare ? All's blue."²

A far saner optimism may be felt by him who yet weeps over the actual evil, but whose soul is sustained by the living faith that

"God's in his heaven—
All's right with the world !"³

The mere fact of optimism is not a proof of any such living faith. But that alone it is which drives to

¹ Browning : *The Statue and the Bust*.

² Browning : *At the "Mermaid"*, xii.

³ Browning : *Pippa Passes*, Pt. i.

effort to help to accomplish the Divine purpose to right the wrong.

The difference, then, between an imaginative painting of life and an ideal is of the utmost importance. The former refuses to see things as they are and rests unmoved amid evil and misery, because, real though they are, they are excluded from the fancy picture. Such imagination inspires to no effort, because it does not represent something different from the actual and more desirable than it, but, on the contrary, pretends to show the actual as it is. On the other hand, a true ideal knows itself as unreal in the present, but sees itself as a goal which by effort may be approached, if not actually reached, by setting out from the present, and in no other way.

Keeping this quite clearly in mind let us now return to the sensitive temperament, indisposed to active interposition in the hard facts of life. Without doing despite to its nature it may yet be of much service to mankind; in inspired souls, indeed, of more service than the active brother. For such souls are the poets and the prophets of humanity. They, more truly than others, see the ideal and the way towards it; their eyes pierce more deeply into the mystery of existence, and more effectively do they hold a light to guide men's steps. The practical man works here and now; the poet also works, but he works for all time and for every place.

"'Tis one thing to know, and another to practise.
And thence I conclude that the real God-function
Is to furnish a motive and injunction
For practising what we know already."¹

So it is that the poets have formed men's lives much

¹ Browning: *Christmas-Eve and Easter-Day*, xvii.

more than the philosophers. Their appeal has been universal, to all that is in men, while that of the philosophers has been almost entirely addressed to the intellect. The poet, too, has the insight that comes by divine gift to see into the heart of things. And what he sees he utters, regardless of whether he can give a logical demonstration of it. But philosophy must be proved, or it is put out of court. So it is only when a philosopher is also a poet, as was Plato, that he has exercised much permanent influence over the mass of mankind.

Nor is the poetic soul confined to those whose power of tuneful expression of the thoughts and imaginings within them has won general attention and earned the name of poet. All emotional temperaments are in their degree poetic. All can sing—

"Thoughts hardly to be packed
 Into a narrow act,
 Fancies that broke through language and escaped ;
 All I could never be,
 All, men ignored in me,
 This, I was worth to God, whose wheel the pitcher shaped."¹

Yet day-dreaming is a real danger, for it may lead to the sentimentality of which we spoke above. The educator must, therefore, try in every possible way to prompt children of such a temperament to find some outward means of expressing their visions which shall bless others as well as themselves.

There is no limit to the actual formation of ideals, and they are of all degrees of worth and importance. Anything we imagine as worthy to be done is to us an ideal. There is, indeed, a more restricted use of the term which limits it to the great thoughts of life—the ideals of

¹ Browning : *Rabbi ben Ezra*, xxv.

goodness, of beauty, and of truth. These we think as unattainable but not unapproachable, and the essential work of humanity is to draw gradually nearer to them. Such approach is step by step through smaller ideals. Ultimately to the eye of faith they are one, though in actual human experience they have hitherto failed to coincide. Nay more, these ultimate goods must in some way be of a nature identical with the actual world, with all its imperfections plain to immediate experience. Nor need this stagger us. It is the very essence of an ideal to be better than the real to which it is related, and to be better by abolishing its imperfections. So, faith in the ultimate goodness, truth, and beauty, of the universe is in no way inconsistent with a full recognition of present evils. It is, indeed, the origin of all striving to remove them; for it gives a spring of action which is absolutely inexhaustible.

"O world, as God has made it! All is beauty:
And knowing this, is love, and love is duty.
What further may be sought for or declared?"¹

Though we have here passed far beyond the ideals of a child we have not left our proper subject. For the higher ideals may be those of every adult, and should emphatically be those of every educator, whether parent or teacher. For surely it is the essential function of education

"To have to do with nothing but the true,
The good, the eternal—and these, not alone
In the main current of the general life,
But small experiences of every day,
Concerns of the particular hearth and home."²

¹ Browning: *The Guardian-Angel*.

² Browning: *The Ring and the Book*, vi., 2089-2093.

To look thus on one's work, to be surrounded by such an atmosphere, to strive towards such ideals is to be a true educator and a true inspirer. For the ideals which shape the life of parent or teacher are daily more and more evident to the child, and help to mould his life for good or evil. As like tends to like, the good within him feels the attraction of fine ideals; the evil draws into itself strength from low and mean ideals.

So it is that the teacher's lofty ideals are the most powerful influences the school can bring to bear to counteract the evil of sordid and degraded surroundings. If these be absent all others must be of no effect.

Most obvious and most true is this in all ideals of conduct and of thought—in all those which represent the good and the true. In what concerns the beautiful the teacher's own enthusiasms will be wasted unless life supply the pupil with materials with which to work. He cannot make bricks without both straw and clay.

In all that enters through the ear—beauty of thought and expression—the teacher can act. The choice of what he reads to the pupils, or allows them to read in school, depends on him; if he will he can unobtrusively but largely direct their choice of recreative reading out of school. This is a vast influence, for from their favourite books many boys and girls gather ideals of conduct more potent than from their personal acquaintances. For imagination has a freer play round the beings of literature; they can be combined and changed in a manner impracticable with actual men and women. They can more easily be made embodiments of single qualities, which thus stand out in all possible impressiveness, and become objects of ardent devotion or of hearty detestation. Many children have as many and as well-

known friends in the realm of fancy as in that of fact ; friends quite as influential on their outlook on life.

The influence of music is much less definite than that of literature. On some, however, its emotional effect is very great ; it soothes in trouble, it inspires to effort, it fills the heart with vague longings. Such an effect cannot be analysed, for it belongs to that half-conscious life in which emotion has its seat. On the other hand, vulgar, trivial, and insipid music attunes the soul to itself.

The tendency of teachers is to ignore all those indefinite effects which cannot be directly estimated. Yet it needs but little knowledge of our own lives to assure us that we are by no means exclusively guided by what is most prominent in our thoughts. Whence comes the strength of our impulses? Often we cannot say. They are rooted in our nature and have gathered force in our lives, and with the cumulative strength of many forgotten indulgences they sweep away the barriers of caution and raze the dam of new resolve. We cannot analyse the influence of music, nor of other forms of art, on this underground life of ours—this reservoir of possibilities which at times bursts forth with volcanic violence, at others sends out the steady irresistible overflow of the lava stream of firm purpose. But on artistic temperaments in general, and on those that are musical in particular, it is great, while on all not insensible to music it counts for something.

In music, as in more appropriate spheres, schools have generally confined themselves to results which can be directly appraised. The children are usually taught to sing ; often still more attention is paid to practising them in reading music. So far this is well, provided that the

music chosen be good. But would it not also be well that, whenever means are available, opportunity should be made for the direct influence through the ear of music much beyond the children's executive skill? Some suggestiveness may be found in Milton's proposal that the intervals of school life "may both with profit and delight be taken up in recreating and composing their travail'd spirits with the solemn and divine harmonies of Musick heard or learnt ; either while the skilful Organist plies his grave and fancied descant, in lofty fugues, or the whole Symphony with artful and unimaginable touches adorn and grace the well studied chords of some choice Composer, sometimes the Lute, or soft Organ stop waiting on elegant Voices either to Religious, martial, or civil Ditties ; which if wise men and Prophets be not extreemly out, have a great power over dispositions and manners, to smooth and make them gentle from rustick harshness and distemper'd passions."¹

In all that instils beauty through the eye the town child is generally at a disadvantage as compared with the country child, and the child from a town slum most emphatically so. It is true that before adolescence most children have little conscious appreciation of beauty, and that they will call a picture of a landscape "pretty" when they will pass by the landscape itself without observation or comment. Their power of seeing wholes is limited. The picture is small and within their grasp, the landscape is too large for them ; they appreciate only small pieces of it, and the younger they are the smaller are the pieces. Still there are small beauties in nature as well as large ones. No doubt a town child who seldom sees a flower can more easily be roused to explicit admiration of a

¹ *Tractate on Education.*

primrose or a daisy than can a country child. That is largely the result of novelty awakening surprise and wonder, and not mainly the expression of a feeling of appreciation of beauty. Even waiving this, the important thing seems to me to be not the explicit and transient impression but the implicit toning of the mind by surroundings. Again it is the effect which cannot be measured that is most to be desired. As boyhood and girlhood give way to adolescence it is especially desirable that the growing soul be surrounded by the calm influences of nature.

"From Nature doth emotion come, and moods
Of calmness equally are Nature's gift."¹

Modern life tends to obscure that influence of surroundings to which the opinion of ancient times attached so great an importance. Probably, indeed, it tends to decrease it. We are all so busy that from moment to moment the present claims us, and the placid influences of nature have little opportunity to work in us. Yet surely there is truth in Mr Fotheringham's words: "Those of us who have scarcely ever seen the dawn, or felt the freshness of the morning, who have scarcely ever stood under the open sky and seen some wide landscape full of light and air, who have never felt the loneliness and peace of nature in quiet places, who have never in some still hour stood under the arch of the midnight sky alone—such, and there are not a few of them in our towns to-day, miss not only precious knowledge of the great world, but knowledge of themselves—of the heart, and the high powers of emotion and thought."²

¹ Wordsworth : *The Prelude*, Bk. xiii. 1-2.

² *Wordsworth's Prelude as a Study of Education*, p. 48.

The more a child is removed from nature the more important it is that he should be open to a similarly constant influence of art. The responsibility here thrown upon the town school for the children of the poor is obvious, especially if the town be of the manufacturing type. To live in Oxford is to be surrounded by architectural beauty ; to live in a town full of factories, forges, and mean streets, is to be hemmed in by artificial ugliness. Even the beauty of sky and fleecy cloud is shut out by murky smoke. Often the country is miles away, and when reached is scarred by mines if not sterilized by noisome fumes. The only spot of beauty is, perhaps, a public park.

The school in such circumstances has a most uphill task if it attempt to give its pupils some material on which imagination may work in constructing ideals of beauty of form and colour. At least there should be well-proportioned and well-lighted buildings, cheerful and artistic, though simple, in their decorations. Plants and flowers tended by the children, and a few good pictures and casts within the reach of their appreciation—to which more specific attention may be drawn at times by informal chats in which taste may be subtly influenced—are probably within the reach of all schools. Certainly all can banish from the walls grisly anatomical diagrams, whether of man or beast, and hideous vulgar daubs, and all can insist on neatness in everything within the school buildings.

These are, of course, only hints and suggestions. But evidently it is perfectly useless to consider how an ideal may develop if there be no material in experience on which the imagination can seize, and which it can transform according to its desire. It is from this point of

view that surroundings are seen to be so vitally important. "We would not", said Plato of old, "have our guardians grow up amid images of moral deformity, as in some noxious pasture, and there browse and feed upon many a baneful herb and flower day by day, little by little, until they silently gather a festering mass of corruption in their own soul. Let our artists rather be those who are gifted to discern the true nature of the beautiful and graceful; then will our youth dwell in a land of health, amid fair sights and sounds, and receive the good in everything; and beauty, the effluence of fair works, shall flow into the eye and ear, like a health-giving breeze from a purer region, and insensibly draw the soul from earliest years into likeness and sympathy with the beauty of reason."¹

That all ideals are connected primarily with doing, with feeling, or with thinking, is a necessary result from these being the essential factors in all human activity. Which weighs most with any individual is a matter of temperament. We all have them all in some degree. For we must not think only of the ideals of perfect goodness of activity, of perfect truth, of perfect beauty, of which we have already spoken. Those are, indeed, ideals to but few, and they the noblest souls. If these alone could be called ideals, education would have nothing directly to say to them, for obviously the young are incapable of the highest possibilities of human life in any form. The ideals of the work-a-day world may be very small and even very low. They may refer to a very little piece of life, or they may set its whole tone and colour all its effects. Pursued for a long time an ideal purpose becomes habitual, and may even drive a man

¹ *Rep.*, Jowett's translation, iii. 401.

on in the accustomed line after he has ceased to value it as an ideal at all.

Without ideals, small and large, effort would want most of its vitality. A boy, in whatever pursuit he is interested, has an ideal of excellence which he sets before himself and which sustains him through monotonous practice. The same boy when set to a task for which he does not care has quite another ideal—to get it done, not as *well* but as *quickly* as possible. In the former case the ideal refers to the object the activity is to accomplish ; in the latter case the accomplishment has no ideal value. So it is throughout life. Good work always results from an attempt to realize an ideal. Remove that spur and the product deteriorates. Decrease the responsibility of the workman for the outcome of his labours and such a lowering of idealism necessarily follows. The pride of the workman in his work is the most valuable asset not only of him who enjoys the product but of the workman himself. In its absence work becomes drudgery, for it is brightened by none of the triumphant joy of seeing one's own thoughts taking shape in one's hands. There is much in the modern conditions of industry, especially manufacturing industry, which necessarily tends to this degradation of work. This makes it all the more desirable that the young should be enabled to feel in all possible ways in their school exercises and lessons the ideal of worthy performance, and that other ideals should be assiduously cultivated to fill as far as may be the empty place in after-life.

Good product may be called the ideal of morality in work. With an extension of the application of 'product' it may further be said to be the ideal of all conduct. The primary spring of good work is the instinct of

constructiveness, and the root of all conduct which affects others is found in the personal instincts, especially those of altruism and of self-respect. As intelligence develops the relations of self to others become clearer, so that they are no longer approved or disapproved by the gratification or dissatisfaction they produce in ourselves. The rights of self are transferred by analogy and sympathy to others, and hence arises an ideal of justice. Of course such a development could not take place out of society. As in all other forms of spiritual growth the opinions and the actions of those around us guide our modes of thinking, feeling, and willing.

The ideal is at first involved in the actual events to which it is applied. The boy judges such an act just, and such another unjust, without having a formula expressive of the nature of justice ready to produce on demand. With many people such moral ideals remain in this intuitive stage throughout life. Especially, as we have seen, is this so with women, who, it has been well said, "are moralists, from the best to the worst of them."¹ But they do not, as a rule, express their morality in abstract propositions, nor judge actions by the extent of their coincidence with such axioms. Rather they base their judgements on their impression of the suitability of each act as a whole to the circumstances which called it forth.

The first step in the disentanglement of such an ideal as that of justice is its personification in a typical hero. Such embodiment is a characteristic of early adolescence, especially among boys. Later the ideal becomes more detached, and at least reaches the stage of current moral principles. The final step to critical thought exercised

¹ Anthony Hope : *The Intrusions of Peggy*, ch. 1.

on such principles is taken but by few ; indeed, only few are sufficiently endowed to take it effectively or profitably. An attempt to secure a premature detachment of principles from concrete conduct leads of necessity to unreality, or to that ethical precocity we know—and dislike—as priggishness.

It will be seen from what has been said that the ideals sought at any time are in the realms of interests. Interests develop out of instincts, purposes are related to interests, and ideals to purposes, so that the springs of life are gathered into one continuous stream.

The religious ideal is both more personal and higher than any social ideal of the relation of man to man. Many writers speak of a religious instinct, but that seems a loose use of the term. Though the religious feeling is universal among the races of mankind, yet it is a compound in which the instincts of fear, love, and self are associated. The form which the religious ideal takes is, of course, determined for a child by the religion of those around him, especially by his home and his church. It is at first purely personal—either a loving Father or a harsh taskmaster according to the religious atmosphere in which the child lives and the teaching on religion which he receives. Later, it expands into a recognition of the brotherhood of others in that Father's family. As intelligence develops the ideal representation of the Godhead becomes more and more spiritual. At adolescence personal religious feelings are often stirred, but except in cases more or less abnormal, there seems no evidence that religious unrest and disbelief are common among those whose religion has from the first been associated with the corporate life of a religious body, and not made a purely personal matter.

The school into which religion enters does more by a spirit of reverence, by common worship, by the unostentatious religion of the teachers, than by set lessons, to cultivate a religious attitude of mind. Not that expositions of belief adapted to the pupils' understandings are not needed to give form to the ideal conceptions. Unhappily, 'religious instruction' is too often only an euphemism for the geography and history of Palestine, which in themselves have no special spiritual significance.

When we turn to ideals primarily intellectual we find two main classes—the practical and the theoretical.

The former show their presence and power in life by their reference to use. From the simple contrivances of the child to the invention of the most delicate, or the most powerful, machinery, or of the most elaborate instruments for aiding advance in science, each is the realization in appropriate material of an ideal plan adapted to an ideally conceived end. For such inventions the mind must not only be stored with all pertinent knowledge but must have a particular bent. Perhaps in no realm of activity can the natural differences between men be more clearly seen. We all make our little inventions in daily life, but those who first imagine, then produce—it may be in many successive stages, each more perfect than the last—instruments that change profoundly the conditions of men's lives or knowledge are few. Nowhere can we better learn the lesson that ideals cannot be taught. Material, and, it may be, inspiration and encouragement, may be given, but the inventive mind can only work when free and untrammelled. Again the course of the school is obvious. In all constructive work it should leave as free a hand as possible in the planning; should welcome originality, even if it spoil

material ; and should give to those who show that they can imagine new constructions generous opportunity to carry out their practical ideals.

The theoretical ideal of the intellect is the attainment of absolute truth. This also we can and should all feel in so far as the truth relates to our concerns. Again it is plain that the imagination will act only in the domain of interest. Whatever branch of knowledge be a subject of interest, in that matter the ideal of truth will most seek to find realization. This love of truth for its own sake is the fine flower which springs from the root of curiosity. Its growth is of necessity gradual. First, it shows as a regard for exactness of statement, then as a thirst for explanation, in which possible reasons for what is experienced are imagined. This slowly but continuously widens till it may try to embrace the universe in one ideal systematic whole.

“God’s gift was that man should conceive of truth
And yearn to gain it, catching at mistake,
As midway help till he reach fact indeed.
The statuary ere he mould a shape
Boasts a like gift, the shape’s idea, and next
The aspiration to produce the same ;
So, taking clay, he calls his shape thereout,
Cries ever ‘Now I have the thing I see’ :
Yet all the while goes changing what was wrought,
From falsehood like the truth, to truth itself.”¹

Always the knowledge is desired for its own sake, as we say. That is, explanation is sought without any necessary reference to whether or not it will be useful to us in any other way than in increasing our knowledge and understanding of things.

¹ Browning: *A Death in the Desert*.

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Doubtless, the theoretical and practical ideals of truth may be conjoined in any one case, or generally in any one person. Then each is of medium strength. When either is very strong it dominates the mind. Then we may say that one or the other is supreme, because the mind is of practical temperament yet well endowed with intelligence, or of intellectual temperament with little proclivity towards the actual and practical.

The dominance of an intellectual ideal in life is necessarily marked by calmness. Yet feeling is by no means absent. There is both the joy of search and the joy of accomplishment, or, it may be, the sorrow of failure. Of the two joys that of search is the immediate effulgence of the ideal. When accomplishment is reached the ideal has been realized and inspires to no further effort. Yet out of it may grow another ideal prompting to fresh striving. Every one who has intellectual ideals feels the force of Lessing's saying: "If I were offered the choice between already ascertained truth and the pleasure of finding it out, I would choose the second."

It is the severely practical person, whose ideal is to get something done, and to whom knowledge is of value exactly to the degree to which it helps towards this, who prefers his knowledge ready-made. Such narrow utilitarian minds are very rare indeed, if not quite unknown, among children. True, some have marked leanings that way, and feel much more strongly the value of knowledge which can be put to material use than of that which can only be made available in attaining more knowledge. But they have curiosity too, and it is not difficult to keep that instinct alive independently, so that knowledge is sought both when it bears on every-day pursuits and when it only enlarges the sweep of fancy. Unhappily

the assumption that the amount of information gained is the chief test of school work has obscured the truth that a mere giving of information not only fails to stimulate the intellect to frame ideals for itself but actually atrophies that power by giving no opportunity for its exercise. Certainly information is the necessary material with which imagination works. But unless the power to form ideals be exercised in youth it will be likely to show itself but a weakly cripple in maturity.

The word 'ideal' is probably more often applied to the various aspirations of art than to those of thought which we have just considered. In them, too, it has become proverbial that the true artist must be born. He needs to be trained to acquire the mechanism through which his art works, but the power of imagining the beauty he represents can in no way be given him. This, indeed, is the case not only in art but in all imaginative constructions. Each mind makes its own ideals, and most truly do they reflect its character. The difference is in degree, not in kind; but that difference sets the real artists of the world in a class apart.

The origin of all art is in the innate tendency to play. It is, indeed, the play of the intellect making constructions for no ulterior purpose but simply for the joy given by their mere existence. "Supreme art," said Schiller, "is that in which play reaches its highest point, when we play, so to speak, from the depths of our being."

All ideals are in a sense creative, for all inspire activity to do something which the doer has not done before. By creative art, however, we mean the setting forth of something new to the world. In the same way we speak of a new discovery or invention or a new theory of life

as "original". These are all realizations of the ideals of the few. Those of the many are more modest. They lead to enrichment of the experience of the individual, not necessarily or usually of that of the world. The intellectual ideal of the many is simply to understand clearly what has already been added to the knowledge of the world ; the moral ideal is to live a life which conforms to rules of conduct generally accepted. So in art the ideal of the many can only be to appreciate with some fullness the creations of others. It should be noted that this is a real ideal : it imagines an attitude of mind and a power of insight and feeling not yet possessed ; it holds this vision to be worthy of attainment, and so it forms the purpose of endeavouring to get as near its realization as possible. Truly it is a lower ideal than that of the creative artist, but it is the only one possible to ordinary minds, and without it art is altogether banished from many lives.

Such appreciation is often made truer and keener by cultivation of a power of imitative production, and to this, most can attain in some modest degree. Indeed, in literature the vast majority of people do take the first steps, though many stop very near the starting-point. Fewer learn to produce with brush and pencil copies even of simple pictures and of natural objects. Yet those who have learned either to represent a spray of flowers with the brush, or to express a body of ideas clearly and forcibly with the pen, have done something of no little importance in improving their power of appreciation of painting or of literature.

Everyone will agree that ideals of conduct and thought concern the school. They belong to the serious business of life, whether that business be to earn a livelihood or

simply to live as a worthy human being. According to the favourite doctrine of the Gradgrinds who are still with us, that is sufficient for the school. On the other hand, Aristotle—whom it is, perchance, permissible to hold wiser than any Gradgrind of them all—insisted on the Greek view that we should “choose business for the sake of leisure, what is useful and necessary for the sake of what is fine.” Both business and leisure are necessary in life, “but leisure is more worth having and more of an end than business, so we must find out how we are to employ our leisure. Not, surely, in playing games; for that would imply that amusement is the end of life.... It is clear, then, that there are subjects which ought to form part of education solely with a view to the right employment of leisure, and that this education and those studies exist for their own sake, while those that have business in view are studied as being necessary and for the sake of something else.”¹ These subjects form the domain of the muses, summed up by the Greeks in the generic term ‘Music’.

We may justify their inclusion in our modern schools even more surely than could Aristotle in the schools of Athens. For it is allowable, if not always judicious, to omit from school elements which are abundantly furnished by life; it is not sufferable that those of which life is otherwise destitute should be excluded. Art in all its forms pervaded ancient Athens; no one could escape its influence. It is not nearly so prominent in modern life. This reacts on the school, and accentuates its inherent tendency to be matter-of-fact and even commonplace in outlook.

The school, however, must direct its efforts essentially

¹ *Politics* (Burnet's Translation) vii, 14 ; viii, 3.

to the training of appreciation. It cannot cater for the possible immortal poet or painter or sculptor among its scholars. It could not help him if it found him ; though, indeed, it might lessen the spontaneity of his utterance. For him, as for others, it could only directly teach the alphabet of the process of expression.

We have already seen that power of imitative production develops power of appreciation. Happily, schools are more and more giving their scholars opportunity to copy in water-colours simple natural objects, such as sprays of leaves and flowers. Fewer seem to encourage them to paint, from imagination playing on past experience, ideal sprays. Sometimes, of course, a child can only reproduce baldly and schematically ; but often a pretty fancy is displayed. Criticism of such efforts should be the child's own, and should first correct anything which is essentially false to nature, and secondly deal with the general grouping and effect of the whole. In producing such a sketch the child uses past experience, but in no wise slavishly. A distinct set of flowers formerly seen does not start up in his mind, but he combines into an imagined whole, without conscious analysis, elements which are yet due to analysis. It need hardly be pointed out that minds which do not visualize can scarcely be expected to distinguish themselves in this.

Original composition is always a case of ideal construction. Let the reader examine his own experience. There is a topic to be discussed and a desire to discuss it well and clearly. As this purpose is dominant in mind we find ideas connected with it coming into consciousness, we know not whence. Some we reject without consideration ; they are felt to be incompatible. Others we reject or modify after critical consideration. So at

last the theme in outline stands in idea. Then comes the expression, which is really the artistic part of the whole. Words and phrases come readily enough, but without critical selection they are apt to be awkward, if not obscure. In time, no doubt, practice may make the art of expression nearly, if not quite, as automatic as the expert painter's strokes with the brush. The beginner has to give care to both.

Now, if school children be trained to aim at an artistic expression of their ideas whenever they write a composition exercise, they will be learning in the surest possible way a little of what style means, when and why one style is good, another bad. Of course the style cultivated must be natural to the child. Some are matter-of-fact in everything. They state an event just as it happened, without comment or reflexions; they describe a thing as it is in its bald obvious qualities. Others are, as we say, more imaginative. They see likenesses and analogies; they personify things and forces, they reflect and comment, they love metaphors and similes. The difference is well illustrated in the productions of two girls, of fourteen and thirteen years of age respectively, recorded by M. Binet.¹ To take one quite characteristic example. The girls were asked to write a short passage beginning "The star —". The elder wrote "The Pole Star is a part of the Little Bear"; the younger, "The star was shining and seemed to lead me; when I felt disheartened I looked up at it and once again pursued my lonely path."

Nothing could be more matter-of-fact than the former production. Probably an attempt to develop in such a mind appreciation for any literary qualities beyond

¹ *Étude expérimentale de l'intelligence.*

methodical clearness and precision would be hopeless. That then—perfect lucidity of arrangement and expression—is the true ideal for such a child.

But many children who write thus baldly are capable of better things. The school too often makes no attempt to cultivate style, and anything which soars above the ground is discouraged by the ridicule of scholars, and at times of teachers. If only this negative influence be removed, style often bursts out spontaneously. Needless to say that with help and encouragement it becomes more common. And, surely, to use one's mother-tongue effectively is no small gain. To illustrate my point I venture to reproduce a little essay written in the ordinary course of the work of a primary school by a boy of ten, which I know to have been his own production, entirely unaided and unprompted. It has its faults, and truly childish ones they are, and we can easily trace the source of his general idea and see the use of imitation made by originality. But it does show the germ of a true literary feeling, and is in every way superior to much similar work.

A WINDY DAY.

"On, On, On, never ceasing in mortal's eyes, I, Boreas, rushed, and the people of the world said as they felt my breath, 'Ugh, the north wind,' and shivered as they muffled themselves up. But on I went whistling and howling among the trees of a mighty forest, tearing up young green saplings like straws, and hurling them defiantly at the mighty oak, who groaned in his branches like a wounded man. Then I betook myself to the highway, and tossed the thatch off the wayside inn, for I feared no man. Suddenly when I was off my guard, the south wind, my eternal enemy, appeared. A battle ensued, and the people of earth called it a hurricane, but spirits knew it to be a battle of the winds.

I came off victor, and feeling mischievous, sped away to a distant

town to give vent to my feelings. When I arrived there a carnival was being held, and I whisked people's hats all over the field. I spied a tent at the farthest end of the field, and puckering up my lips I blew a blast which sent tent and all, hurry, scurry over an ice-cream cart headlong into a ditch, and I laughed long and merrily, for that was indeed a carnival to me.

But I was growing tired now (for even Boreas grows tired) and my cousin the east wind wished to take a journey over the sun-scorched deserts of Arabia, so I returned to my home at the North Pole.

Such early efforts are likely at times to show exaggeration, straining after effect, incongruity of style and matter, and, of course, inequality in execution. It should be remembered, however, that the children who naturally write in this style are the sensitives, that they are easily discouraged and their self-respect readily wounded. After all, they are only trying their wings. We do not ridicule or discourage exuberance of movement when a child is learning to ride a bicycle ; we know that this—like youth—is a fault time will cure. Surely the same sympathetic attitude should be taken in the matter of composition. Kindly suggestion when metaphor or treatment is out of keeping with the subject will be welcomed, but mere exuberances of style may be left to cure themselves, unless, indeed, they show a tendency to develop into artificiality. Above all, it should be borne in mind that what seems redundant ornament to one appears apt and charming to another. The teacher of matter-of-fact practical temperament should be especially suspicious of his judgements on imaginative literary productions of his pupils.

This leads us, indeed, to a very real difficulty in all exercise of influence on children's appreciation. Taste must be the spontaneous outcome of the soul or it is a

mere sham. It would be impossible to say how much of the general taste of any period is mere following of fashion. And fashion itself is often the outcome of certain intellectual ideas rather than of artistic feeling. This is admirably put in an article in *The Times*:¹ "Weed is only a bad name we give to a plant when we do not want it. If there were no gardens there would be no weeds. In fact, it is the law that makes so handsome a plant as the dandelion a sinner, the law that dandelions are wild flowers and have no right in the garden. A dandelion in a flower border looks positively ugly to a gardener, and the sight of it makes his fingers itch to pull it up. He has his idea, a purely conventional idea, of what flowers ought to be in a border; and this idea is so strong that it even controls his sense of sight, making him see ugliness where there is beauty, just because that beauty is not part of his own design.

"This fact about the dandelion might be turned into a fable for art critics, to warn them that their taste and the taste of their time is not absolute, that their sense of beauty is likely to be affected by circumstances to an extent which they cannot realize. There was a time, and not so long ago, when Gothic buildings were regarded by the man of culture much as dandelions are regarded by the gardener. The very name Gothic, like weed, was a term of reproach, and it explains why Gothic buildings were thought ugly. They were supposed to be the work of a barbarous age, which, because it was barbarous, could do nothing good; and every characteristic of the Gothic was regarded as a mark of barbarism. It was an argument in a circle no doubt, but such arguments seem most convincing when once a prejudice is

¹ March 28, 1910.

thoroughly established. First the eye is influenced by the mind, and then the mind reasons from what the eye, thus influenced by it, reveals to it.

"The contempt of Gothic is only one instance out of many of the same kind of prejudice. It acted in the other direction in the case of Graeco-Roman art. That was supposed to be the product of a great age of civilization, and was therefore assumed to be beautiful. Indeed, the Graeco-Roman sculptors were held to have been masters of an absolute canon of beauty. The Venus de Medici was an ideal, and so was the Apollo Belvedere. In so far as any sculpture departed from this ideal, it was ugly and barbarous; and the best the modern artist could do was to imitate these masterpieces as closely as possible. Hence Canova and the classical pictures of David and innumerable other works of art, which now seem about as interesting as illustrations to the classical dictionary."

Canons of taste which find acceptance in one age are rejected in another. Is it, then, to be held that after all there is no real difference between good and bad art; that beautiful and ugly are words whose real meaning is prejudice? Such scepticism would strike its roots far, and would contradict the constant faith of mankind. The lesson rather is that taste cannot be directly taught. Such teaching makes us see things through a more or less powerful disturbing medium, brings in

"The instinctive theorizing whence a fact
Looks to the eye as the eye likes the look."¹

It is not from ideas but from things that taste must spring; for it is things that are beautiful or ugly while

¹ Browning: *The Ring and the Book*, i. 863-4.

ideas may spring from any source, and have no necessary connexion with aesthetic principles. As *The Times* says in concluding the article from which I have quoted : " In fact, the sense of beauty seems untrustworthy because it is seldom trusted. We talk of bad taste when we mean no taste. If we could analyse all the ugliness of art, we should find probably that it was the result, not of a perverted sense of beauty, but of ideas interfering with the sense of beauty ; and that the pleasure it gives is not aesthetic at all. The difficulty is, not to take pleasure in the right things, but to take the right kind of pleasure in them. If only we could judge our feelings about works of art instead of judging the works of art themselves, we should be much less liable to error."

Taste is often communicated by contagion of enthusiasm ; never by didactic directions to note the beauty of this or of that. Nor is it well to ask for expressions of taste. If they come spontaneously, well and good. But to demand them is a sure way to cultivate that insincerity which leads many men and women to talk of art less to express appreciation than to conceal its absence. The scholastic mania for putting everything into words has strangled many a promising ideal at its birth.

It is, however, quite essential that the material provided should be so graduated that each psychological age has put before it literature in which it can appreciate both the ideas and the form. Art differs from nature, real literature from mere narrative or description, in that it presents to us not merely facts, but the facts interpreted by the imagination of the artist. The true artist-soul sees deeply into the inner meaning of things, and detects likenesses and relations which the common mind cannot

see unaided, which the prosaic mind often cannot see at all. These last are they who dismiss all poetry as "silly stuff." Probably they are the victims of a 'practical education' as well as the possessors of minds originally commonplace. To advance in power of appreciating literature, especially poetic literature, is to gain increased insight into such analogies. This is possible only if the amount and kind of insight demanded at any time be such as is spontaneously active.

In all ordinary minds the similarities recognized are first those of sense, later those of emotional tone. We may see the progress writ large in the development of poetry. The imagery of the earliest poets is simple and somewhat infrequent; its appeal to sense is direct. On the other hand, the most characteristic and the most valued modern poetry makes its appeal to the deeper spiritual life, and evokes emotional response by its power of filling the soul with living images, all adapted to deepen and strengthen that tone. Compare, for instance, the simple and direct imagery of Homer—his "Zeus the cloud-gatherer", "the silver eddies of Teneios", "the stream which floweth on over him like unto oil"—with such poetry as

"All he had loved, and moulded into thought,
From shape, and hue, and odour, and sweet sound,
Lamented Adonais. Morning sought
Her eastern watch-tower, and her hair unbound,
Wet with the tears which should adorn the ground,
Dimmed the aerial eyes that kindle day;
Afar the melancholy thunder moaned,
Pale Ocean in unquiet slumber lay,
And the wild winds flew round, sobbing in their dismay."¹

¹ Shelley: *Adonais*, xiv.

A like development may be traced in poetical form. In early English poetry such a mechanical similarity as alliteration played an important part. The lines ran in couples, and usually two chief words in the first line, and one in the second began with the same consonants, as

“wudu wyrtrum fast
wæter oferhelmath.”¹

Some eight centuries later the same form was still retained. In *Piers Plowman* the alliterative rule is very generally followed—

“There preched a Pardonere
As he a prest were,
Broughte forth a bulle
With bishopes seles.”²

Though alliteration is still used with considerable effect it is no longer subject to definite rules of occurrence. Tennyson often employs it happily, as in

“The splendour falls on castle walls
And snowy summits old in story:
The long light shakes across the lakes
And the wild cataract leaps in glory.”³

The formal recurrence of the same consonantal sound which marked old verse seems to us artificial, just because we demand that the effect of alliteration shall be to make the verse harmonize subtly with the ‘feeling’ of the passage. In the example just given, for instance, the consonance of the alliterative effect with the general atmosphere of repose is perfect.

¹ “a wood fast of roots (*i.e.* a firmly rooted wood),
the water over-canopies.”—*Beowulf*, 2727-2728.

² 136-139.

³ *The Princess*: Intro. to iv.

Now-a-days, we should find nothing to please our taste in efforts of perverted ingenuity which in former ages won admiration. We read of a Latin poem of some hundred hexameters in which every word began with P, and of another set of verses in which C was the only initial letter—a compliment to Charles the Bold to whom they were addressed. Among other recorded examples was an *Iliad*, from each successive book of which a corresponding letter of the Greek alphabet was omitted. "The same species of laborious trifling by the report of the traveller Chardin, appears to have prevailed in Persia. One of the poets of that country had the honour of reading to his sovereign a poem, in which no admission had been allowed to the letter A. The king, who was tired of listening, and whose weariness had probably too good a cause, returned the poet thanks, and expressed his very great approbation of his omission of the letter A ; but added, that in his opinion, the poem might, perhaps, have been better still, if he had only taken the trouble to omit, at the same time, all the other letters of the alphabet."¹

Rhyme in modern verse corresponds broadly in its effect to alliteration, for it also appeals to audible consonance. Like alliteration, rhyme may become wearisome if continued through a long poem. In each case the mechanism of the verse is too insistent for modern ears. Doubtless also it is often a bondage to the poet himself, though not many are as frank as was Butler in lamenting it—

"But those that write in rhyme, still make
The one verse for the other's sake ;

¹ Brown : *Philosophy of the Human Mind*, lect. 36.
w. 2 F

For one for sense, and one for rhyme,
I think's sufficient at one time."¹

But that even the greatest poets at times feel themselves cramped is evident by such bad rhymes as that of Milton—

"That we on Earth with undiscording voice
May rightly answer that melodious noise."²

In rhyme, as in alliteration, literature supplies some curious specimens of ingenuity, as, for example, George Herbert's short poem *Paradise* which consists of five three-lined rhyming stanzas, in each of which the word ending the first line is shortened by omitting its initial letter to give the ending of the second line, and the same process is repeated for the third time. For instance, the second stanza reads—

"What open force, or hidden charm
Can blast my fruit, or bring me harm
While the inclosure is thine arm?"

The essential element in poetic form is, however, neither alliteration nor rhyme, but rhythm. Here also fashion changes. Early English poetry with its rhythm determined by the number of accents rather than value of syllables sounds uncouth to a modern ear, which is only satisfied with syllabic regularity as well as regularity of stress.

Rhythm is analogous with 'time' in music. In each case certain forms are congruous with some emotions, repugnant to others. If this be neglected neither true poetry nor true music results. Blank verse suits *Paradise Lost*, but it is impossible to imagine Shelley's

¹ *Hudibras*, Part ii. Canto i., 27-30. ² *At a Solemn Music*, 17-18.

Ode to a Skylark written in that form. Perhaps as good an example of incongruity as can easily be found among really great writers is the metre in which Scott wrote *Marmion*. The form would suit a brief lyric, but in so long a poem as that to which it is here applied it becomes wearisome and trivial.

In reading aloud or reciting, both rhythm and rhyme should be duly marked. "Many reciters seem to be ignorant of the fact that rhythm, in all poetry that is worth reciting, is a means of expression ; indeed, that rhythm and sense are so closely connected that the one cannot be understood without the other. Spoil the rhythm and you spoil the sense ; misunderstand the sense and you will mar the rhythm. In fact, good verse is said wrongly if it is not said rhythmically ; and any dramatic airs and graces which break the rhythm, or even distract the hearer's attention from it, are not merely superfluous but mischievous. A reciter of poetry ought no more to gesticulate than a violinist ought to wave his bow about in the middle of his performance. Music, in the one case, and words, in the other, are the only proper means of expression ; and in good poetry there is even less occasion for displays of virtuosity than in good music. A reciter's first aim should be to understand thoroughly the poem which he proposes to recite ; not merely the sense of it, but also the quality of its emotion ; for he cannot understand the one without understanding the other. And he cannot understand either unless he is aware of the expressive function of metre and rhythm.

"We say metre and rhythm, because rhythm is necessary to preserve metre from mere sing-song. It is the peculiar character of each line, expressive of its peculiar sense and emotion, which is imposed upon the general

pattern of the metre. A familiar instance is to be found in the line—

“Of man’s first disobedience and the fruit—”

Here a reader who does not give careful attention to the sense will adhere to the strict metrical pattern, lay no stress on the word *first*, and spoil both the rhythm and the meaning of the verse. In all good poetry there are such delicate varieties of rhythm; and the reader or reciter, if he searches for these and uses them as means of expression, will find that there is no room in his art for dramatic effects. He must know how to manage his voice, of course, so that his audience may not be troubled by its defects. But when he can do that he has nothing to think about but the phrasing of his poetry, which should be musical rather than dramatic, and expressive as the phrasing of music is expressive. . . .

“The treatment of rhyme is one of the most difficult problems in the delivery of poetry. Reciters often say rhymed verse as if they were trying to conceal the fact that it is rhymed. But poets would scarcely use rhymes if they did not mean them to be heard; and it is said that many good poets, in reading their own poetry, are apt to lay great stress on the rhymes, as on the rhythm. Certainly a reciter should not be afraid of rhymes. Where a rhyming word is important in sound or sense he should sound it boldly; and even when the sense runs over without a break into the next line he should not be too anxious to insist upon its continuity. For in poetry lines are facts that are not meant to be ignored. Indeed, rhymes are there to emphasize them. But the good poet usually shows, by the use of strong or weak rhymes, how far he means them to be stressed. In the

Ancient Mariner for instance, which is a model in all the formal excellences of poetry, it is quite clear that the rhymes are meant to be stressed in the verse—

“The fair breeze blew, the white foam flew,
The furrow followed free;
We were the first that ever burst
Into that silent sea.”

For here the rhyme-words are both important in sense and strong in sound. On the other hand, the rhymes should be softly sounded in the verse—

“Sometimes a-dropping from the sky
I heard the skylark sing;
Sometimes all little birds that are,
How they seem'd to fill the earth and air
With their sweet jargoning!”

For, apart from the weakness and imperfection of the rhyme sounds, the rhythm would be spoilt by any emphasis on the last words of the lines. In fact, rhyme is a part of metre and, with metre, is always subject to rhythm. Understand the rhythm of a poem and you will know how to treat its rhymes. The more expressive a poem is, the more it is swayed by rhythm; and the good reciter will allow his voice to be swayed by rhythm as if he were thinking aloud and rhythm were the natural expression of his own thought.”¹

In all the formal elements of poetry the direct appeal is sensuous. In metaphor and simile the suggestion rests in emotional congruity or immediate apprehension of relations. Things of sense are made vehicles for things of spirit. The metaphor is spontaneous; it springs from an immediate feeling or emotion; it is

¹ Article on *The Reading of Poetry* in *The Times*, Sept. 19th, 1910.

essentially the outcome of passion. Hence the ease with which metaphors are mixed in an oratorical outburst, as when in a debate in the House of Commons a prominent politician accused the Government of desiring "to kill one Assembly by a blow, and to destroy the other Assembly by the slow poison of the guillotine." The simile, on the other hand, is a deliberate comparison, often of some length. It is a vehicle of description intended to induce a quiet appreciation and so to bring out some special emotional value. While, then, the appeal of metaphor is directly emotional that of simile is primarily intellectual. By metaphor we are stirred, but on simile we love to dwell.

To illustrate metaphor and simile adequately would be an endless task. Two metaphors that have always seemed to me very beautiful and expressive are in a *Fragment on Music* by Shelley. He invokes Music—

"Silver key of the fountain of tears,
Where the spirit drinks till the brain is wild;
Softest grave of a thousand fears,
Where their mother, Care, like a drowsy child,
Is laid asleep in flowers."

The simile in the last two lines is equally satisfying.

Of all the metaphors in *In Memoriam* none seems to me more expressive than where Tennyson calls the "brief lays" which compose that poem

"Short swallow-flights of song, that dip
Their wings in tears, and skim away."¹

Many boys and girls can feel the beauty and effect of such metaphors as these. The teacher must not

¹ *In Memoriam*, xlviii.

attempt to interfere. The whole spiritual exaltation evaporates in talk.

Metaphors are also to be found in prose. Bacon made very frequent use both of them and of similes, often quaintly humorous.

"A king . . . is the fountain of honour, which should not run with a waste pipe, lest the courtiers sell the water."¹

Far excelling this in elaboration are the metaphors of Lyly. His *Euphues and his England* ends with a long eulogy to Elizabeth in which, in one paragraph, we have:

"This is that *Cæsar* that first bound the Crocodile to the Palme tree, bridling those, that sought to raine hir: This is that good Pelican that to feede hir people spareth not to rend hir owne personne: This is that mightie Eagle, that hath throwne dust into the eyes of the Hart, that went about to worke destruction to hir subiectes, into whose winges although the blinde Beetle would haue crept, and so being carryed into hir nest, destroyed hir young ones, yet hath she with the vertue of hir fethers, consumed that flye in his owne fraud."

Such writing is as far removed from the true use of metaphor as it can very well be. It is as laboured, as strained, and as artificial, as the ingenious tricks with the alphabet already noticed.

Of similes I will cite but a very few arranged roughly in order of appeal to successive stages of emotional development.

"There is sweet music here that softer falls
Than petals from blown roses on the grass,
Or night-dews on still waters between walls
Of shadowy granite, in a gleaming pass;
Music that gentlier on the spirit lies,
Than tir'd eyelids upon tir'd eyes."²

¹ *Of a King*

² Tennyson, *The Lotus Eaters*.

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The pictures raised are simple and clear, and there is no appeal to deep or complex emotion.

But little more difficult, though less immediate and intimate to experience, is Keats'

"Then felt I like some watcher of the skies
When a new planet swims into his ken."¹

Wordsworth's

"Thy soul was like a star, and dwelt apart :
Thou hadst a voice whose sound was like the sea."²

demands a wider scope of imagination, and its force can only be felt by one who has heard much of Milton's poetry well read. The comparison in the first line, moreover, has only one of its terms in the realm of sense.

Shakespeare's

"I have ventured,
Like little wanton boys that swim on bladders,
This many summers in a sea of glory,
But far beyond my depth."³

is picturesque, and the simile comes straight home to personal experience. But its full force is only felt after some experience of wide ambition which o'erleaps itself, and that children can have but in a small degree.

Landor's beautiful simile

"The noble mansion is most distinguished by the beautiful images it retains of beings passed away ; and so is the noble mind."⁴

is simple but appeals directly and forcibly only to those who have lost some who were dear to them. The

¹ *On First Looking into Chapman's Homer.*

² *Sonnet on Milton.*

³ *Henry VIII.*, act iii. sc. 2.

⁴ *The Pentameron and Pentalogia.*

appreciation of boy or girl is, therefore, likely to be purely intellectual.

The following somewhat laboured simile will probably appeal to teachers rather than to their pupils :

“As sickly plants betray a niggard earth,
Whose barren bosom starves her generous birth,
Nor genial warmth, nor genial juice retains,
Their roots to feed, and fill their verdant veins :
And as in climes, where winter holds his reign,
The soil, though fertile, will not teem in vain,
Forbids her gems to swell, her shades to rise,
Nor trusts her blossoms to the churlish skies :
So draw mankind in vain the vital airs,
Unform'd, unfriended, by those kindly cares,
That health and vigour to the soul impart,
Spread the young thought, and warm the opening heart :
So fond instruction on the growing powers
Of nature idly lavishes her stores,
If equal justice with unclouded face
Smile not indulgent on the rising race,
And scatter with a free, though frugal hand,
Light golden showers of plenty o'er the land :
But tyranny has fix'd her empire there,
To check their tender hopes with chilling fear,
And blast the blooming promise of the year.”¹

The last example I shall give, exquisite as it is, I should not expect many young people to enter into very fully. Yet I would encourage all who were caught by the beauty of the words to commit it to memory. Years will give it a meaning, and such a verbal gem deserves to be treasured. It is Shelley's

“Life, like a dome of many-coloured glass,
Stains the white radiance of Eternity,
Until Death tramples it to fragments.”²

¹ Gray : *The Alliance of Education and Government*. ² *Adonais*, lii.

The educational point is this. Power of appreciation will grow if suitable material be given and judiciously used, not as a text on which to examine, but as an influence which works mainly in the dark. Of course, as the apprehension of relations in a simile is intellectual, to that extent help may be given by suggestion or even by direct explanation. The error is to dwell on this, and so hinder the aesthetic and emotional effect to which intellectual grasp is only the hand-maiden.

Before leaving the subject of literature a few words may be said on the use of contrast in making a point clear and vivid. Pithy epigrams are fixed in the mind by their sharp angles of expression as we may, perhaps, call them. Take for example Rochefoucault's

"Passion often makes a fool of a man of sense : sometimes it makes a man of sense of a fool."¹

Like every other marked peculiarity of style antithesis becomes wearisome if frequently used in continuous writing. The mind is made continually to hop and skip instead of quietly plodding along. Moreover constant contrast of phrases soon loses its effect, and so the one justification for its use vanishes. Macaulay's prose is certainly open to the criticism of being too antithetical.

The subject of artistic and literary appreciation leads us naturally to say a few words on humour. It is a perilously small step from the sublime to the ridiculous, and that step is not at the same point for all minds. Especially is it placed differently for a child and for a cultured adult. Art grows out of play ; so the younger the child the more his sense of humour is limited to

¹ *Maxim* 327.

practical jokes. The next stage is when it embraces verbal descriptions of such events. The first sign of humour with a really literary basis is often the enjoyment of puns, and they are only a kind of practical joking with words. Nevertheless, the power to see a pun is a sign that language is beginning to attract attention by itself and apart from the meaning it conveys. Young children cannot see puns because their minds are wholly occupied by the general meaning. The same holds true of many worthy, but rather dull and prosaic, adults. On the other hand, a constant indulgence in punning—especially when youth has been left behind—indicates a frivolous cast of mind. Nevertheless, puns are at times effective, particularly as a form of gentle ridicule. I cannot refrain from quoting a happy instance of this, related of the late J. K. Stephen :

“On a certain occasion a Fellow of Trinity College, Cambridge, had been discoursing to an Essay Society on various theories of immortality, and had concluded a desultory speech by a quotation from Wordsworth’s famous poem. No sooner had he uttered the line ‘Heaven lies about us in our infancy’ than J. K. S. broke in with, ‘Perfectly true, D. ; but that’s no reason why you should lie about Heaven when you’re grown up.’”¹

Doubtless there are children who early see humour in many situations which involve no practical joking, and soon after get some appreciation of humour in expression. But this is exceptional before adolescence. Quite commonly the humour of *Pickwick* fails to appeal to children in later boyhood and girlhood.

Many things, however, excite the laughter of a child. The most general condition of the ludicrous seems to be the unexpected introduction of an incongruous

¹ Article in *The Daily News*, Feb. 11, 1901.

element of relatively small importance. For instance, if a fierce dog rushed on to a stage during a comedy, sprang at the throat of the leading actor and severely injured him, it would be quite incongruous with the spirit of the scene, but it would by no means be ludicrous. If one began laughing, in the belief that the dog's attack was feigned and was part of the fun, he would change his attitude immediately he grasped the true situation. But if a small terrier ran on to the stage during one of the ghost scenes in *Hamlet*, and began yelping at the ghost, most people would find it ludicrous.

It takes but a very trivial occurrence of this kind to move children to laughter, and not much more to excite the risibility of adults. This presents a certain element of danger in trying to arouse literary appreciation in children. For too often, if the desired feeling be not stirred, the inclination to laughter is aroused, though decorum may induce its suppression. I have known a teacher excite a class of boys of about fourteen to laughter by a really effective reading of a poem, simply because he was a stranger and, therefore, not bound to them by bonds of sympathy, and because at that critical age they were inclined to look upon all unaccustomed expression of emotion with contempt. Obviously, such a result hinders the growth of literary appreciation.

A good parody is an excellent instance of humorous incongruity. With adolescents, such efforts may be effectively used to aid in the formation of a critical taste if they be not introduced too frequently. A parody ridicules the weaknesses of the author on whose works it is based, but does so indirectly. A judicious use of parodies, therefore, cultivates a habit of reflective comparison, and militates against the indiscriminate enthusi-

asm which, by holding to be good all that is written by a confessedly great author, makes real discriminative taste practically impossible. Take, for instance, the following extract from a parody of *Marmion*. Of this Scott himself is reported to have said to one of the two authors "I certainly must have written this myself, although I forget upon what occasion!"

"Still o'er his head, while Fate he braved,
His whizzing water-pipe he waved ;
'Whitford and Mitford, ply your pumps,
You, Clutterbuck, come, stir your stumps,
Why are you in such doleful dumps ?
A fireman, and afraid of bumps !—
What are they fear'd on ? fools ! 'od rot 'em !'
Were the last words of Higginbottom."¹

How happily, too, is the mirror held up to "the other Wordsworth" in the same famous set of parodies—

"Aunt Hannah heard the window break,
And cried, 'O naughty Nancy Lake,
Thus to distress your aunt :
No Drury Lane for you to-day !'
And while papa said, 'Pooh, she may !'
Mamma said, 'No, she sha'n't !'²

Well, after many a sad reproach,
They got into a hackney coach,
And trotted down the street,
I saw them go : one horse was blind,
The tails of both hung down behind,
Their shoes were on their feet."²

Here the humour, which was unhappily quite unconscious in so much of Wordsworth's ostentatiously simple

¹ James and Horace Smith : *Rejected Addresses*.

² *Ibid*.

verse, is made conscious, and the real poetic worth of such writing becomes manifest.

Ideals, then, appear very early in life. At first they are aspirations to acquire the power to do things which others are seen to do. Then, as emulation and critical power grow, they become more and more detached from actual models. In other words, the individual begins to be self-directing—to set before himself things he would like to do and to be. Without a luxuriant growth of ideals in the soul the life is thin and starved. The school cannot plant them, but it can secure that the soil is well prepared so that when a seed of inspiration falls, it matters not whence, the plant may spring up and bear fruit an hundred-fold. At the same time a kindly watchfulness is needed to uproot and destroy, if it be possible, evil aspirations. But it is the positive culture that is all important, and that demands both insight and tact.

Action towards ideals is the one unchanging condition of a fruitful life. For such action the school should provide opportunity and give encouragement in all the great spheres of life. So only may its pupils escape the unavailing regrets of age, when

“Suns rise and set and rise, and all is nought,
The coast of boyhood farther still recedes,
Age can but marvel why no dreams were brought
By manhood into deeds.”¹

¹James Williams: *Thomas of Kempen*.

CHAPTER XIII

CHARACTER

THAT it should train character is one of the very few general statements about education which meet with universal assent. I am not sure, however, that it is more than one of those platitudes, the oracular enunciation of which is, according to Mr. Birrell, "the best way of introducing any subject" because "they arouse attention, without exhausting it, and afford the pleasant sensation of thinking, without any of the trouble of thought."¹ For, when some examination is given as to what is meant by 'character' one finds much want of precision and much lack of agreement. From the same want of clearness of conception it comes to pass that but seldom does either home or school make any systematic attempt to train towards a definite ideal of character. It results that what training is given is not only desultory but incoherent, dependent on considerations of the moment rather than on fixed principles.

All discussion of what makes a character morally good or bad belongs to ethics. The function of psychology is limited to enquiry into the constituents of character and their relation to each other, and into the part character plays in life. This is, nevertheless, a necessary preliminary to any practical attempt to influence character.

¹ *Obiter Dicta: On the Alleged Obscurity of Mr. Browning's Poetry.*

An educator must know its nature or he cannot deal with it effectively. To desire to train to goodness, and even to have a clear idea of how goodness is to be shown in act, are in no sense sufficient. Desire here, as elsewhere, is a blind and blundering guide unless intelligence trace the way. And the way lies through the child's character, in which also is to be found the true end. For only in so far as action expresses character does good outward conduct show that this end has been reached.

We will, then, first try to get a working idea of what should be included in character, and then ask how far that idea applies to the young. Here, as elsewhere, I wish to avoid all unusual or technical use of terms. Let us, therefore, approach our analysis from the side of common speech, and take as our guide typical current expressions about character.

In the first place we are forced to the position that character is not necessarily connected with goodness, as is implied in the educational commonplace with which this chapter begins. We accept as rational and consistent such statements as that 'X is a notoriously bad character', 'Robespierre had a character terrible in its inflexibility', 'The character of Tiberius has attracted general execration'; and Keightley wrote "thorough selfishness formed the basis of Henry's character."¹ Similarly, we speak of the 'characters' of a play, and include under the term both the good and the bad. This comprehensive use of the word will cause no surprise when it is remembered that the distinction between good and bad is ethical, while the matter named is psychological, and that psychology has no moral categories.

Let us now examine some further expressions. We

¹ *History of England*, vol. ii. p. 74.

may fairly speak of a noble character or of an ignoble character ; a spiritual character or a mundane character. Washington Irving wrote of "the softness and effeminacy which characterize the man of rank in most countries," and we may say that the Romans of the early Republic were men of hard and warlike character. Such expressions imply a particular general attitude to people and things, a certain emotional evaluation of experiences, definite aspirations and wide-reaching purposes. Our judgement of the goodness or badness of characters largely depends on the nature of such ideals of life and conduct as are embodied in them.

In the next place 'character' seems always to include some reference to the extent of the intellectual outlook, as well as to the nature of the purposes and aspirations. We speak of some as men of magnanimous character, and of others as showing a petty character. So, too, we distinguish between characters as unselfish or selfish, just or unjust, where in every case the reference includes breadth of outlook as well as emotional relation.

Width of outlook, however, is rather a matter of the relation of the self to its surroundings than of extent or kind of information. Amount of learning and kind of occupation are properly excluded from character. We speak of a learned or ignorant man but not of a learned or ignorant character. For 'learned' and 'ignorant' colloquially refer to certain somewhat arbitrarily selected parts of human experience. A ploughman whose apprehension of his relations to his fellows and of his rights in comparison with theirs is perfectly clear and just may be profoundly ignorant of the sciences and the arts, yet deeply learned in what is essential to the conduct of his own life. This practical knowledge of life we do include

in character, but we do not commonly call it knowledge. So we may find equally admirable, or equally despicable, characters in all walks of life. Rank and culture give no presumption for or against excellence of character. A bricklayer may have as fine a character as a bishop, and a duke be as admirable as a docker.

I no more share the expectation that increased 'knowledge' will, of itself, improve character, than the exactly opposite opinion of Mandeville, who two hundred years ago asserted that "Vice in general is no where more predominant than where Arts and Sciences flourish... and it is certain that we shall find Innocence and Honesty no where more general than among the most illiterate, the poor silly Country People."¹

It is important to be clear on this point, for on it much confusion seems to prevail. Increase of knowledge does not necessarily mean increase of worth measured by ethical or social standards. It is not through the imparting of information but through the moulding of character that general education makes for the good of the community. There is no necessary connexion between the two. The knowledge which is acquired may in no sense enlarge that width of outlook which does enter into character, but may simply be an increased power of seeing where personal advantage lies, and of planning to secure that, regardless of the rights and claims of others. Nevertheless, it is true that a usual defect of ignorance is narrowness, and this always means that personal opinions are exalted into universal truths. "Intensely, thoroughly ignorant people attain to a height of self-esteem that the man who has spent a lifetime in amassing knowledge, only to find that all he knows is

¹ *An Essay on Charity and Charity Schools.*

but a drop in the full cup of knowledge, can never hope to reach.”¹ So knowledge which throws light upon the individual’s place in the world and upon his relations to his fellows does help him to distinguish between personal prejudice and generally received principle. But it is evident that much of the information given in school does not satisfy this test. So it may be said generally that if advance in what is commonly called knowledge does make for improvement in character, it does so indirectly and because the general trend of the education gives it its true position and perspective.

So far we have considered what may be called the wider sense in which ‘character’ is used. There is certainly a narrower sense implied in such expressions as ‘A is a man of much character’, ‘B is wanting in character’, or in Pope’s libellous assertion that

“Most women have no characters at all.”²

When we examine the context of such judgements we invariably find that the reference is to strength and persistence of purpose. Sometimes this is explicitly stated. “The face which character wears to me is self-sufficingness. . . . Character is centrality, the impossibility of being displaced or overset” wrote Emerson.³ Similarly in J. S. Mill’s *Essay On Liberty* we read: “A person whose desires and impulses are his own—are the expression of his own nature, as it has been developed and modified by his own culture—is said to have a character. One whose desires and impulses are not his own has no character, no more than a steam-engine has a character.” That eminent psychologist M. Ribot adopts the same

¹ Helen Mather : *Comin’ thro’ the Rye*, pt. i. ch. 13.

² *Ep. to a Lady*.

³ *Essay on Character*.

limitation: "In order to constitute a character, two conditions are necessary and sufficient: unity and stability. Unity consists in a manner of acting and reacting which is always consistent with itself.... Stability is merely unity continued in time."¹

Of course, if this be interpreted literally it results in the denial of character to the great majority of adults and to practically all children. M. Ribot does, indeed, deny that any but the minority have any true character. "It is clear that among the innumerable individuals of the human species, there must be some, and these by far the greater number, who have neither unity nor stability, nor personal characteristics peculiar to themselves."²

But though this sense of the word 'character' is one of those sanctioned by usage yet it seems to be elliptical. When we speak of a man of intellect we mean a man of unusually fine intellect, but we do not intend to deny intellect to the rest of mankind. So when we speak of a man of character we mean a man of unusually definite character. That this does not implicitly class the majority of people as characterless seems to be shown by the fact that "a weak character" is an accepted expression.

It becomes evident that strength is the especial mark of character when we remember that character is shown in conduct, and that we judge another's character by his conduct, and by that alone. A man of developed character is essentially one whose life is unified by a consistent purpose and who does not change that main purpose according to the surroundings in which he finds himself, though he may modify the mode in which

¹ *Psychology of the Emotions*, Eng. trans., pp. 384-385.

² *Ibid.*, pp. 385-386.

he strives for its attainment. When a man ignores circumstances and pushes on indifferent to them we do not call him a strong, but an obstinate, character. Strength means making use of obstacles, neither refusing to recognize them nor being dominated by them. The man of strong character develops not by adaptation *to* environment but by adaptation *of* environment to himself. The weak character develops by adaptation *to* environment. The obstinate character refuses to acknowledge the existence of environment in so far as it is distasteful to him and can in any way be ignored.

Consistent striving for purpose—that is, strength of character—however, implies not only power to make use of circumstances but internal self-mastery. As Emerson finely says: “Character is the moral order seen through the medium of an individual nature.”¹ External matters excite within us various instinctive impulses; and as the external situation changes so do the impulses it excites. There are thus two sets of forces always acting on a persistent purpose to turn it aside. One is the opposition of the external world—the difficulties put in our way by people or circumstances, difficulties often unforeseen. To overcome them involves struggle, often painful and, it may be, attended by frequent failure and disappointment. The other is the treachery of our own passions and appetites, which incite us to seize the enjoyment of the moment, regardless both of the present neglect of purpose and of the danger of forming a habit which can but weaken character.

Weakness of character may, then, be shown in two ways. There is first the individual who has no real personality; who is moulded by his surroundings, who

¹ *Essay on Character.*

takes his opinions and his aims from others, who is dominated by the external. This is the moral and social weathercock, who shifts from moment to moment, blown this way and that by every breath of public opinion. He is weak because he has no resisting power and no initiative. Such a character is an unhealthy and morbid development of an emotional temperament blessed with neither much will nor much intelligence.

Then there is the person of volatile temperament who has never learned to curb his impulses. He also responds continually to his environment, but he does so, not in the passive kind of way of the formless character we have just outlined, but in the excitable and spasmodic activity to which gratification of every impulse leads. He may take up a purpose, but he soon drops it. He, like Dryden's Achitophel, is "Everything by turns, and nothing long." He is the slave not of his external surroundings but of his internal impulses. To gratify them he will often exhibit feverish bursts of effort to change his circumstances. As the former type is wanting in energy, this latter is defective in the control of energy.

This leads us to another important point. Suppose the life to be generally ruled by purpose. Are we then to stigmatize the character as weak if the individual follows the present incitement? It would often, I think, be more correct to say that the character is imperfectly formed. As the bearing of various purposes on conduct is more clearly seen, the character may prove to be of considerable strength. The present defect may be one of intelligence and experience, rather than of desire or will. For it seems to me that it is not the whole of life which can be included in character, but only that part

which is known to ourselves. We say sometimes that a particular action is quite opposed to a man's character. Yet it may be certain that he did it. No doubt we require unquestionable proof when we believe the character a strong one ; but we acknowledge the possibility. Can we not also in our own experience find times when we acted in opposition to our general plan of life, and, it may be, repented bitterly afterwards? So it would seem to be allowable to say that the character may be intrinsically strong and yet that the life may show some want of harmony. Of course, the older the individual the less would this be true, for with extended experience and developed intelligence the bearings of actions are more and more made manifest. But in dealing with the young it is a very important consideration. Not every vagary of behaviour is to be taken as a proof that there is no sound core of character.

If we now gather up the threads of our discussion we shall say that the dominant note of character is organization. By a person's character we understand the extent to which his life is directed towards a definite end, and ruled by definite principle. We mark our sense of the value of that end by adjectives which imply that it may be admirable or contemptible, or of any intermediate shade.

In a perfect character the whole life would be so organized ; the aim would be the highest, the outlook the most inclusive, the will the most persistent.

"How happy is he born and taught
That serveth not another's will ;
Whose armour is his honest thought,
And simple truth his utmost skill."¹

¹ Sir Henry Wotton.

Certainly this would not mean that all such characters would be alike. Each would be relative to the life it has to live, and each would in addition have its own personal idiosyncrasies. The various temperaments if perfectly developed throughout life would give different types of character, yet each perfect of its own kind. There would be the character whose ideals are essentially practical but who would seek those ideals in the best and most worthy way. There would be that whose predominant note would be fine feeling, but in which that feeling found expression in noble and beautiful deeds. There would also be the character organized, so to say, round the intellect, with a keen sense of right and truth and duty.

Nor can our ideals of perfect womanliness coincide with those of perfect manliness. Neither a mannish woman nor an effeminate man satisfies the aspirations of mankind.

So, not only is there no uniformity in the actual characters around us, but there is no such thing as one ideal of a good character to which all should try to approach, and all deviation from which is a mark of inferiority. Our custom of speaking in general abstract terms obscures this. Nor is the result simply theoretical. How many a child has been morally ruined because those who brought him up did not understand him, did not see what must be his only true line of development, and so tried—with the best intentions in the world it may be—to force him into a mould absolutely foreign to his nature? The first thing it is essential to recognize in bringing up a child is that there is one, and only one, general way in which *he* can attain his perfect stature, and that that way is determined by

his inner nature, not by the prepossessions of those under whose charge and control he lives.

The actual characters of men, women, and children, are never perfect. They therefore differ, not only as temperament and disposition would cause them to differ, but also in the stage of development they have reached. We may go further and say that they are unlike in the stage of development they are capable of reaching. It would be to shut one's eyes to facts to deny that some children are born with weak wills, with shallow feelings, with dull and obtuse intellects. Soon any or all of these defects become apparent. They can no more be removed than a physical organic defect can be cured. In this sense it is true that "no change of circumstances can repair a defect of character."¹ Yet it is quite possible to mistake what is the result of bad training for an inherent defect. Who would venture to say of a vacillating adult whom he has not known most intimately from early childhood that he was born weak? As an originally good bodily constitution is sometimes ruined by riotous and irregular bodily living so an originally good moral constitution may be ruined by riotous and irregular moral and mental living.

Moreover, although it is doubtless true that the original nature of everyone imposes a limitation on the possibilities of his development, yet this by no means enables us to determine in any case what that limitation is. For each one of us the possibilities of development both for himself and for those whom he tries to educate must be regarded as boundless. Of course, development will be more rapid in some cases than in others. Yet even here it is easy to be deceived. Development

¹ Emerson : *Essay on Character*.

is seldom, if ever, uniform in any aspect of life. So the apparently slow development of one as compared with another at any one time may be compensated, or more than compensated, by a more rapid development at another time. "Nature never rhymes her children, nor makes two men alike."¹ And this is as true of their mode and rate of growth as it is of the kind of character that growth is slowly evolving.

It follows that in estimating the character of a child we must not apply the standard of an adult. That would be as absurd and unjust as to test his intellectual or physical powers in a similar way. According to his psychological age we must judge him. And his psychological age, or stage of mental advancement, does not always agree with his physical age. A child may be either more or less advanced in all that concerns the inner life than most children of its age and sex. For all educational purposes, it is the psychological age that counts.

It is certain, then, that "character is not ready-made, but is created bit by bit and day by day"². But how is it created? We are often told that the work of education is to build up character, and the parent and teacher are exhorted to form the characters of their children. All such suggestions of the passivity and plasticity of the child are the outcome of the false psychological hypothesis that our being is wholly determined from without which we have already rejected as untrue to the facts of life. It would be much more true to say that each person builds or forms his own character, for character develops only in the conscious voluntary life in which we deliberately set up ideals and purposes, and

¹ Emerson: *Essay on Character*.

² Edna Lyall: *In the Golden Days*.

plan means to realize them. For, as has already been said, character is that within us of which we are conscious as emphatically ourselves. It cannot begin to develop out of original natural endowment till the child learns to distinguish between himself and the things around him from which he receives impressions. This, however, is very early in infancy. It may seem strained and far-fetched to speak of the character of a baby. But I do so only in the same sense in which one could speak of the intelligence of the same baby. Neither character nor intelligence deserves the name when judged from the standard of later life, but in each case there is the seed from which alone the fruit can spring.

From such seed character can develop only in one way—through the determinate activity of the child itself. But, be it noted, the activity is one of will. Of course, the will shows itself in bodily action, but it is the will, and not the action, which is the essential thing. Will is moreover, as has been shown, opposed both from without and from within. The former opposition has either to be taken up into the will itself or to be removed. The latter cannot be removed : it can only be overcome.

Here we have an absolutely fundamental distinction. If the hindrances from within are not conquered and brought into subjection the child becomes a slave to his passions ; he grows up vacillating, untrustworthy, and ineffective, unable to secure any result worth attaining because he has no self-control, no persistence. In a word, his character is in a stage of arrested development.

Among the outer hindrances, however, are those which are due to the nature of things, and to these he must learn to accommodate his actions if he would carry out his will. “ All our strength and success in the work

of our hands depend on our borrowing the aid of the elements. You have seen a carpenter on a ladder with a broad-axe chopping upward chips from a beam. How awkward! at what disadvantage he works! But see him on the ground, dressing his timber under him. Now, not his feeble muscles, but the force of gravity, brings down the axe; that is to say, the planet itself splits his stick."¹

Yet more important and more directly pertinent to the development of character is the recognition that there are laws and elements in the human world which can be made hindrances and helps to the execution of purpose as can those in the physical world. Here is seen the psychological explanation of the supposed paradox that a child is trained to freedom through discipline. Effective discipline works on the core of character. If compulsion be appealed to, it is merely to bring home to the understanding that human law cannot be violated with impunity. That is only the first stage. The second is to inspire in the child the desire to be his own master. Nor is this difficult if it be done through concrete experiences as they arise. For instance, children do make up their minds to work steadily at their lessons and yet yield to solicitations to amusement which defeat that purpose. A boy is quite capable of recognizing that in this he has not been what he meant to be, or done what he meant to do. In other words he grasps that his action was antagonistic to the character he is forming and which expressed itself in the neglected purpose. I have little faith in the influence on the development of the character of a child of set courses of lessons about morality. In the influence of the recognition that he

¹ Emerson : *Society and Solitude*, ii.

has, in such and such a particular instance, fallen below himself, I have much. The teaching of morality, if it is to be successful, must be as concrete as is morality itself, and that it can be only when it touches immediately an actual piece of child life. Even with adults there are few who are really moved to action by abstract ideas and principles, and when they are, the action is commonly wanting in vigour. With children the moving-force is always dyed with emotion. In the formation of character the emotion of self-respect plays an indispensable part.

A child's character, therefore, is not trained by leaving him to do as he likes, but by evoking in him by sympathetic suggestion the desire to obtain thorough self-mastery. And, let me add, the stronger the character of the suggestor, providing it be not lacking in the magnetism of personal sympathy and be kept under wise constraint, the more effective will be such attempt to evoke the will. Such evoking is the one and only condition on which character can be trained.

In these considerations, too, we reach the sense in which it is true to say that character is a system of habits. Evidently the habits which enter into character are those established tendencies of will and feeling which we have called *habitudes*; not the various acquired forms of automatism of bodily movement. The evil practical influence of the false hypothesis of the absolute plasticity of the child has nowhere been more amply shown than here. Mere drill in matters of outward behaviour has been believed to be efficacious in forming character, because it induces uniformity of action. The surprise has been as real as it has been painful when, over and over again, the youth has shown a character quite

antithetical to that which his parents or masters had fondly believed they were forming. From our point of view this is no matter for amazement. Whatever fails to affect the will remains outside the formation of character. In the cases we are considering the influences which are really operative on will are feelings of resentment and of antagonism to the restraint, and these are easily and naturally transferred to the laws and principles which the restraints are intended to implant. The mistaken regulation of action has an influence on will, but it is an influence exactly opposite to that intended and desired.

The development of real habitudes of harmonious will, feeling, and thought, is, on the other hand, the formation of the chief element of strength of character. With every exercise they increase in power, in propulsive force, and in width of reference. So they are brought more and more into harmonious relation with each other, and collect into a systematic hierarchy. In a mental life thus organized the incidental impulses of the moment have but little chance of turning aside the main current of purpose. Certainly it must be granted that organization may degenerate into mechanism, and so the spiritual life be made too automatic. "The multitude stands by the formulas that profess to solve the eternal problem. It follows them blindly, like the schoolboy who cares not whether they are right or wrong, or whether the answer is conclusive. So long as there is an answer of some sort its mind is easy."¹ This results from too narrow a purpose and too restricted an outlook. Not intellectual principles but uninformed prejudices are embedded in the habitudes of such a life. Real

¹ W. J. Locke : *At the Gate of Samaria*, ch. 2.

living habitudes are trends of life ; they are not the ceremonies of past life. Thus they carry in themselves the power of adaptation, and meet new occasions in fresh ways.

It is further true that a character may be admirable in its unity and stability and yet far from admirable in its totality. That is because its outlook and aim do not commend themselves to the moral judgement. Many a miser has shown the extreme of self-control and the most marked persistence in amassing gold. But such an aim has not in it those marks of humanity, that power of satisfying human aspirations, which alone can win general human approval.

Character is, then, the true self. It is that which we love, or which we dislike, in another. It is that which wins love or attracts antipathy to ourselves. For high intellect, for artistic genius, for mighty power of command, for great oratorical gifts, for wonderful inventive ability, for charming manners, we feel admiration. But we love and reverence only those whose gifts are embedded in a noble character. And our reverence and love are in proportion to the beauty of character, not to the greatness of the gifts. So it is that the great changes in the world have been due to men of strong character. "It is indisputable that the great movements which stir society from its very foundations, are invariably produced by the workings of the living spirit of man. The sense of moral and intellectual want which disposes men to seize on new opinions often lies for centuries fermenting in the fathomless depths of the heart of society. At length, in the fullness of time, arises one of those master spirits, endowed with the genius, energy, and confidence, which fit a man to wield

these moral forces ; to reveal to his age the wants of which it had but a dim and perplexed consciousness ; to interpret to it its own confused and half-formed opinions, and to give them shape, compactness, and strength."¹

Yet more pertinent to our subject is the consideration that such an influence is personal, and is most strong over those who are brought into direct contact with it. In other words, it is character which counts in influencing others, so that men or women of weak character can never be really effective influences on the lives of the children entrusted to them. On the other hand, the insistent dominating character, when through loving sympathy it avoids raising opposition, must be always on guard lest it also, by blocking the way of all initiative and by cultivating a habit of relying on another instead of on self, prove antagonistic to the desired growth of the young.

Necessary as it is to insist that character is essentially formed from within, so that each one of us is responsible for the character he is, that is, for himself, yet it would be a mischievous one-sided misrepresentation to ignore the constant moulding forces from without. I have not so much in mind now the personal influence of individuals, often as powerful as it is direct, as the general all-pervading tone of society in which each has to live. For that determines in a general way the more direct influences brought to bear on the child in family and in school. They are certainly more operative in the family, for the sphere of the school, and consequently its formative influence, are more limited than those of the family. In the latter, life is lived in all its aspects ; in the former, only in some of its relations. The school is an artificial group, the family a natural one. While, therefore, both

¹ Ranke : *History of the Popes*, trans. by S. Austen, vol. ii., p. 1.

reflect the tone of the community, the family does so more fully and more freely than the school. Moreover, in the school that influence is often modified by the conservatism of tradition which secures the survival of ideas and ideals of the past which, outside the school, may have become mere pale ghosts, or specimens of social or moral archaeology.

The mind and character of the nation, then, affect the individual child chiefly through the family. But as he grows older he enters more and more into direct contact with wider circles. From the carefully tended garden of the school he goes forth into the open field of life, and though he will meet with great variety of opinions yet he will find a general tendency to view life in one fundamental aspect. The many opinions, though divergent in innumerable ways, nearly all express the general attitude of the community towards life.

We have seen that character is self-development and implies self-knowledge and self-control. We have seen, further, that hindrances to the true growth of character are all antagonistic to fixity of purpose and consistency of aim. It follows that communities which offer many inducements to deviation from purpose, and which furnish few opportunities for self-communion, are unfavourable to the development of strong unified characters. An abnormally strong natural will holds on its way with little or no regard to continual solicitations to wander. But the ordinary person is much affected by his surroundings. If conditions be favourable his will may grow strong ; if they be antagonistic the development of his character will be arrested. In any case there will be imperfection which in more favourable circumstances would have been avoided. A weak will under favourable conditions

may learn to stand alone ; amid adverse influences it is bound to suffer moral shipwreck and to grow into one of those defective forms of character which we have already considered.

After such general considerations I would ask the reader to recall the estimate of our national character which I quoted from a most competent French observer.¹ May I then beg him to consider the question whether there are not in our present public life many influences antagonistic to the preservation of that self-control and determination which stand out so clearly in Dr. Le Bon's picture? The following extract from an article on *Reactions* in *The Times*² certainly deserves serious consideration :

"The Greeks, perhaps, had a peculiar need of the doctrine of the golden mean because of the richness and instability of their natures. In conduct, in politics, and in all kinds of theory, they seem to have been subject to violent enthusiasms and reactions. A new idea spread among them like fire through stubble ; and the very eagerness with which they welcomed it made them equally ready to forget an old one. They were, for the most part, a people of towns and subject to the contagion of crowds, that mysterious contagion which seems to act, as it were, physically on the mind and to pervert the reason so that it turns traitor against itself. In the past we have been inclined to despise both the Greeks and the modern French for their instability while wondering at their intelligence. We might be slow, but we were not infirm of purpose. We did not worship a popular idol one day and break it in pieces the next. We could boast thus of ourselves in the past, but can we in the

¹ See pp. 105-106.

² Nov. 10th, 1910.

present? We have to remember that in the last hundred years or more we have been changing from a country into a town people, that we are now subject to a contagion of the crowd which is new in our history. We know how the Romans changed their nature when they too changed from a country to a town people; how they acquired the Greek instability without much of the Greek intelligence, how the mob of Rome became incapable of governing either the world or themselves. That is the fate that threatens us also unless we can by an effort of will preserve the ancient firmness of our character. In particular we need to be on our guard against the swift and incessant reactions that more and more tend to waste and distract our energies. We cannot flatter ourselves that these reactions affect only the passions of the ignorant. They are just as violent and common among people of culture, and produce the same incessant change in our ideas and tastes as in our popular songs and catch-words. Indeed, as the ignorant mob turns year by year from one mechanical joke to another, so the cultivated mob turns from one set of ideas and from one jargon to another. The contagion of the crowd works with equal power in both cases and with equal unreason. It is not spread by popular assemblies, but by books and newspapers; and the superior people who despise the mob are themselves a mob of readers and talkers at the mercy of mob reactions.

“The worst evil of these reactions in morals, in ideas, and in art is that they waste the experience of ages. Just as the individual who is at the mercy of reactions never profits by his own experience, but, as it were, is born again a fool with each new infatuation that masters him, so it is with a mob that runs after every new fashion of

thought. Every fresh theory for them cancels all old ones. When Nietzsche is the fashionable prophet he sweeps away the Commandments, the Gospels, and Kant. It is as if no one had ever learned anything about life before him. His philosophy is welcomed for the mere pleasure of the shock which it gives; and when that shock has spent itself the philosophy will be dropped, as a monkey drops one nut to clutch at another. The wisest men know that in all things there is an orthodoxy of the ages, which should be modified and strengthened by the experience of each new generation. They react only against the errors of the past, and they are careful not to react too far. But the cultivated mob is tired of all orthodoxy, and it reacts against it for the mere pleasure of reaction. Thus it falls a prey to the oldest of heresies, even the heresies of Thrasymachus, if only it has never heard of them before. And by its absurdities it confirms dull men in their dullness and brings all speculation into disrepute. Nowadays there is in England a solid mass of Philistines who profess that they have no interest in discovering the truth about anything, because ideas about the truth are incessantly changing. Their scepticism is not philosophic, but lazy; yet it is the intellectuals who provide them with their excuse. Truth is, indeed, undiscoverable by those who grow tired of it if it is not new; for they do not even look for it, and do not know it if they find it by accident."

Happily it seems established that the fundamentals of national character do not change so rapidly that a new kind of nature is at once transmitted to succeeding generations. But if the national life in the present cultivate qualities antagonistic to those inherited from the past the formative effect on each new rising generation

will be cumulative. The disease may first attack the surface of the national character, but if it be unchecked it will surely eat into its heart.

I believe nobody will deny that our age is marked by hurry and bustle, by love of novelty and of excitement, by constant occupation with the outer things of life.

“The world is too much with us ; late and soon,
Getting and spending, we lay waste our powers :”¹

wrote Wordsworth, and it is certain that the century which has since elapsed has not diminished the ground of his lament.

It would be futile to gird at the actual course of things. One should, however, try to recognize what is harmful in influence and in tendency, so that amid the gains which time brings we may not lose the treasure passed on from the past.

The one constant determining feature in all the developments of the life of our time is the continuous increase in the demands made by external affairs on our time and energy. It is true that there are powerful and successful movements for reducing the hours of manual labour. But from the standpoint of the development of character the allurements of pleasure are more dangerous than the demands of work. Of course, all must recognize that there is need for recreation. That surely goes without saying. All that is here urged is that the tendency of modern life, particularly in large towns, is towards supplying incentives to occupy *all* the time and energy in ways in which the sole determination of experience is from without. It may be a concert, it may be a theatre, it may be a music-hall, it may be a football match,

¹ Wordsworth : *Sonnets*.

it may be a political meeting. All these, and their like, good as they are in due proportion, so crowd upon each other that many people live on from day to day, never thinking except about the immediate concerns of their families, their business, or their pleasure ; never, that is to say, deliberately setting up before themselves an ideal of life, never asking themselves what is the value to them of those things in which they spend their energies so profusely.

If we apply the analysis of this chapter to such a state of mind we see that it means that life is determined from without not from within. Either the character has that excessive plasticity which makes the man a mere echo of the opinions, and a mere copy of the actions, of those with whom he associates ; or it has the instability and the self-indulgence—which of necessity involves the crudest selfishness—of the man whose impulses and passions rule his life.

The signs that these elements of weakness are widely diffused in our day seem to me both numerous and insistent. The entertainments which are most popular are becoming increasingly frivolous and meaningless. They attract through an obvious kind of trivial prettiness when they do not appeal through a vulgar suggestiveness. Nor is there force in the contention that the audiences have so exhausted their minds in thought that they are too tired for any but the lightest stimulation. Without want of charity it may be suggested that an equally tenable hypothesis is that their minds are numbed and atrophied from want of exercise in anything outside the immediate demands of their material lives. " Machines have not yet come to life among us, but they are beginning to exercise a tyranny which is the more

oppressive in that it is mechanical and blind. There is no tyranny so hard and intimate as that which controls amusements, and this mechanical tyranny is changing the nature of our amusements in every direction. If a tyrant of flesh and blood tried to do this we should instantly rebel; but we submit to the tyranny of machinery without a murmur; indeed, we seem scarcely to be aware of it. The reason is that it appeals to all the lazy and negative part of our minds. . . .

“The growth of mechanical amusements is only a natural development from the purely passive enjoyment of art. There was once a time when the artist was not specialized in England, when most people, both high and low, rich and poor, were trained to amuse each other and themselves. Music and dancing and acting in the age of Elizabeth were arts practised by the people, not by professionals for the people. Shakespeare laughs in *A Midsummer Night's Dream* at the amateur players of the time, just as amateurs are laughed at in the amusing *Pantomime Rehearsal*. But there is this striking difference between the two plays, that in the one the amateurs are of the people, and in the other they are of the aristocracy. Bottom would be an impossibility in a modern burlesque because his original does not exist now, or is only a romantic rarity in some out-of-the-way villages. Indeed, some wise and excellent people are trying to revive Bottom as they are trying to revive morris dances and folksong. But they have many difficulties to contend with. Every class in this country has lost the habit of amusing itself artistically. The poor as well as the rich look to professionals to amuse them, and have a profound distrust of their own artistic powers and a false shame in exercising them. The

artist, whether actor, musician, or dancer, is regarded as a peculiar person, half admired and half despised. He is not, as he once was, merely a man who can do what every one does, only better. He is a professional entertainer with mysterious powers of his own, which ordinary people do not share and cannot understand; and they would think it indecent presumption to attempt to compete with him. This has gone so far that they would rather hear a professional singer on a gramophone than an amateur in the flesh; and now in our villages the gramophone on summer evenings pours out trash from the music-halls to an audience that has forgotten the very names of the old songs and the steps of the old dances. Perhaps in another generation, where cricket is now played on the village greens there will be cinematograph pictures of matches at Lord's or the Oval."¹

The same inertia of the life of thought and activity of the life of the senses are shown in a love of excitement which is often so artificial as to appear neurotic. For example, consider the popular daily press with its hysterical comments on passing events and its exaggerated headlines. Consider also the kind of appeal so often made to popular gatherings by politicians seeking parliamentary honours. Think of the garbled statements of fact, the suggestion of the false, the suppression of the true, the sound and fury of the empty bombast and the frothy inflated rhetoric, the violence of personal invective, the ludicrous poverty of argument, which constitute such displays. By partisan journals on the same side these effusions are lauded as 'great,' 'strong' and 'historic', in sublime disregard of their want of basis in fact and yet more striking defects in reasoning. Not

¹ Article on *Mechanical Amusements*, in *The Times*, Sept. 7th, 1910.

seldom to the dispassionate observer the greatness seems to consist in pettiness of outlook and the strength in weakness of logic veiled by audacity of assertion. When speeches are made on popular platforms which the orator would not venture to repeat in the House of Commons, the inference is irresistible that he is trading on the imperfect knowledge, the deficiency in critical power, the appetite for excitement, and the susceptibility to the moulding influence of mere blind party-spirit, in his hearers. In other words, he is taking advantage of the weakness of character in those he addresses, as well as exhibiting unlovely traits of his own character. That he is also helping to accentuate those deficiencies is very unlikely to have occurred to him. He, too, looks only to the present effect.

These have only been adduced as signs fairly easy to read of a want of stability which the present conditions of our national life tend to cultivate. Another such sign is the feverish haste to get the last new thing, or to adopt the last new fashion whether of dress, of art, of speech, or of any other mode of activity. Even in education there is a dangerous tendency to forget that 'new' and 'true' are neither synonymous in meaning nor identical in application.

Some, with the optimism natural to youth, may think that the picture just drawn is too darkly coloured. To this I would reply that it is not presented as a picture of the whole of the community, but only as a setting-forth of features which can surely be found by any one who looks for them. I do not contend that the evil is as yet deep-seated, though I fear it is wide-spread and still spreading. When one believes that one sees a wrong which can be remedied, or at least lessened, one's duty

is to point it out. The remedy for this social disease is plain to see if not easy to apply. Not easy, because it can only be applied by the people themselves, and they do not recognize that they are spiritually sick, just because the very nature of the disease keeps them from pondering such topics.

Education, especially school education, can do little directly. But it must do what it can, and here under 'education', I include all personal agencies for the moral improvement and elevation of the people. Everything which strengthens self-respect and develops strength of purpose, which increases knowledge pertinent to life and cultivates critical thought, which broadens the social outlook and deepens charity, has an influence in developing individual capacity and, through that development, in reducing the faults and in strengthening the virtues of that soul of the people on which alone the destinies of our country depend.

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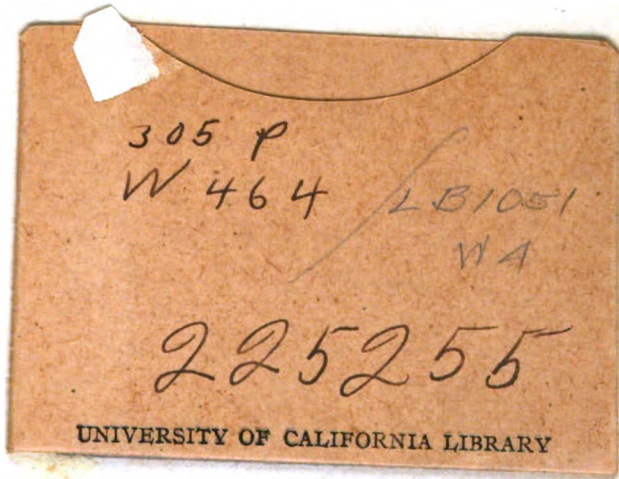
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